

# The National Locksmith®

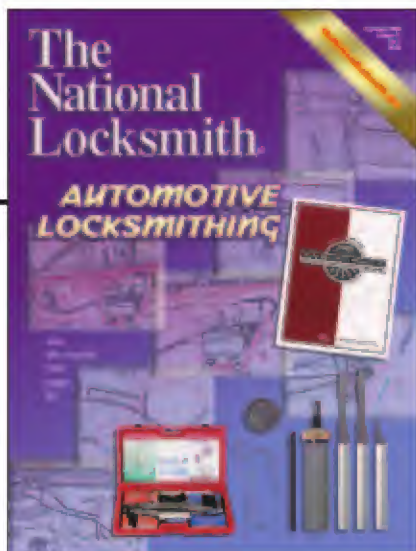
## AUTOMOTIVE LOCKSMITHING

also  
this month  
DHI  
page  
67





**On The Cover...**



A-1, Auto Security Products and High Tech Tools are just a few of the manufacturers offering new products for automotive applications.

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# CONTENTS

The National Locksmith September 2000 • Vol. 71, No. 9

## FEATURES

**COVER  
 FEATURE!** **12**  
 Auto Entry Sets From  
 High Tech Tools

**20**  
 1999 Ford Police  
 Interceptor, Part 1

**28**  
 Automotive News

**34**  
 Quick Entry Update

**36**  
 Safes & Safe Tools

**40**  
 Tubular Locks, Part 4

**52**  
 The .003 vs. .005  
 Pin Debate

**62**  
 Mosler — Ins And Outs

**67**  
 25th Annual Door And  
 Hardware Institute  
 Convention And Exposition

**72**  
 DHI Product Showcase

**80**  
 Get A Lock On Security

**85**  
 Key Control Products

**87**  
 Adams Rite MS® Lever

**130**  
 1999 Honda CBR600F4

**147**  
 Attract New Clients

**148**  
 Distributor Snapshot

**150**  
 VIN's And Air Bags The  
 Mitchell® Way

**154**  
 Protecting Your Assets

**156**  
 2000 Tahoe

**167**  
 TheNationalLocksmith.com

## DEPARTMENTS

- 5** COMMENTARY
- 6** MANGO'S MESSAGE
- 10** LETTERS
- 48** BEGINNER'S CORNER
- 60** THE LIGHTER SIDE
- 97** EXPLODED VIEW
- 108** TECHNITIPS
- 128** ROAD RALLY
- 141** CASH STATION
- 146** BUSINESS BRIEFS
- 168** TEST DRIVE



# COMMENTARY



## AutoSmart Advisor™ is here now!

**I** first heard the name of the book about five years ago...and I laughed. AutoSmart™...it just sounded funny to me. Five years and thousands of copies later, and I am no longer laughing. The AutoSmart™ book by Mike Hyde has helped countless locksmiths work on a myriad of cars quicker and more accurately.

For the past year or so, Mike has been working feverishly on the creation of a new software program. Called AutoSmart Advisor™, the program gives you all the information you could ever need on over 5,000 cars, updated through model year 2000.

Unlike the book, however, the software is interactive. Sure it gives you all the known methods to make the first key, and as always it tells you about all the codes, keys, etc. used on the vehicle.

**M**ore than that, though, the software also includes every part used on the car that could conceivably be needed by a locksmith. AutoSmart Advisor™ prices the parts for you based on adding any margin you choose onto the cost of the part. You simply tell the software what percentage markup you charge on parts. You tell it your hourly labor rate, how much you charge for a trip fee, and what the tax rate is in your area.

After that, to estimate a job for a customer takes only seconds. Look up the car by year, make and model. You'll have access to all the specs on the car on one screen. This information includes how to make the first key, code locations, transponder programming procedures, spaces and depths, airbag info, and so on.

You can print out any or all of this information to take on the job with you. Or just install the program on your laptop and take it right on the job. But one of the best parts of the software is how easy it now is to quote a price on a job to a customer.

**B**y clicking on one button, you come to the Parts Department screen for that particular vehicle. All parts for the car are shown, and priced. Labor times to replace that part are also shown. Simply click off which parts you'll be working on. AutoSmart Advisor™ then applies your labor rate and the time required to replace the parts. It also applies the correct tax if you ask it to, as well as giving you the option to apply your trip charge. As I said, the program also shows your cost on the parts as well as the cost you'll charge the customer.

Within seconds of receiving a phone call, you'll be able to quote a fair price to the customer on virtually any job relating to virtually any car. You'll also have every scrap of information you need to do that job. You can even save estimates for later reference.

Of course, there is a lot more to know about this software. Read all about it on pages 56 and 57. There is also a demo that allows you complete access to all features of the software for a twenty-one day trial. So get ready. Because now, your computer is the hottest automotive tool you can own.

*Marc Goldberg*



**Have questions? Want free technical help?  
Free Locksmith Forums!**

[www.TheNationalLocksmith.com](http://www.TheNationalLocksmith.com)

**Marc Goldberg**  
Publisher

September 2000 • 5



# Mango's Message



**B**efore I get into this month's editorial, I'd like to start by saying that I never expected the overwhelming response to last month's Mango's Message (Complain, Complain, Complain) regarding Kim Fryer's photograph, which was actually a Lisa Simpson Pez dispenser. I was inundated with letters and e-mail messages requesting an actual photograph. Well, I have kept you in suspense long enough so here it is:

I just hope it never ends up in a US Post Office with my neck clutched in her hands.

As many of you know, a couple of years ago the state of Illinois enacted a locksmith license law under the "Illinois Private Detective, Private Alarm, Private Security And Locksmith Act" requiring all Illinois resident locksmiths to possess a state issued license. Illinois is one of the few states in the country requiring a locksmith license to operate. License procurement basically required background checks, electronic fingerprinting, documented work history, \$1,000,000 in liability insurance, \$137.80 exam fee and passage of a state given test along with a \$500 license fee.

According to the state of Illinois, the practice of locksmithing includes, but is not limited to, the servicing, installing, originating first keys, re-coding, manipulation, or bypassing of mechanical or electronic locking devices at premises, vehicles, safes, vaults, safe deposit boxes, or automatic teller machines.

When this Act was first passed, a grandfather/waiver clause allowed those, who qualified, to acquire a locksmith license without taking the required exam and retaining the \$137.80 fee. The grandfather/waiver clause was in effect for about six months, after which all license applicants were required to pass the state given test to obtain a license.

A grandfather/waiver means that an applicant will be licensed without regard to current requirements because statute allows this based on past qualifications and practices (for a specified time only).

Soon after the grandfather/waiver provision timetable ended, a virtual uproar from several locksmiths erupted.



## Second Chance

Most claimed they knew nothing about the locksmith license, let alone the grandfather/waiver clause. Many only learned about it because they found themselves being contacted by the *Illinois Department of Professional Regulations* for non-license compliance.

Because of the overwhelming backlash from locksmiths that were not notified of the new state license requirements, the grandfather/waiver provision is once again being offered. From September 1, 2000 through December 31, 2000, those who have not yet applied for a license can do so without taking the required test and expending the associated fee.

According to the state of Illinois, a person is qualified to receive a license as a locksmith if he or she meets all of the following requirements:

- (1) Is at least 18 years of

**Greg Mango**  
Editor







age.

(2) Has not violated any provisions of Section 120 of this Act. (Get a copy of the Act for provisions.)

(3) Has not been convicted in any jurisdiction of any felony or at least 10 years have expired from the time of discharge from any sentence imposed for a felony.

(4) Is of good moral character. Good moral character is a continuing requirement of licensure. Convictions of crimes

not listed in paragraph (3) of subsection (d) of this Section may be used in determining moral character, but do not operate as an absolute bar to licensure.

(5) Has not been declared by any court of competent jurisdiction to be incompetent by reason of mental or physical defect or disease unless a court has since declared him or her to be competent.

(6) Is not suffering from habitual drunkenness or from narcotic addiction or dependence.

(7) Has not been dishonorably discharged from the armed services of the United States.

(8) Has passed an examination authorized by the Department in the theory and practice of the profession.

(9) Has submitted to the Department proof of insurance sufficient for the individual's business circumstances. The Department, with input from the Board, shall promulgate rules specifying minimum insurance requirements. This insurance requirement is a continuing requirement for licensure. Failure to maintain insurance shall result in the cancellation of the license by the Department. A locksmith employed by a licensed locksmith agency or employed by a private concern may provide proof that his or her actions as a locksmith are covered by the insurance of his or her employer.

For a copy of the locksmith Acts & Rules and Licensure Applications/Forms, or other information, contact the:

Illinois Department of Professional Regulation  
320 West Washington  
Springfield, IL 62786  
Phone: (217) 785-0800  
Fax: (217) 782-7645  
Web: [www.dpr.state.il.us](http://www.dpr.state.il.us)

I highly recommend that you use the web address to obtain the necessary documents and information regarding the grandfather/waiver. The information is all downloadable from the *Department of Professional Regulations* web site. All that is needed is Acrobat reader to view the files. If you call the state, realize that you are speaking with a clerk who knows little about your situation. Don't expect them to be able to answer any questions.

I also highly recommend that you take advantage of this second chance window of opportunity if you haven't already. I can assure you that the state will not feel sorry for you again.

P.S. All right, if you must insist. Will the real Kim Fryer please stand up! There, I hope you're all satisfied. O.K. Kim, that's enough exposure. Now back to the dungeon.

TNL



#### Grandfather/Waiver for Locksmiths

September 1, 2000 - December 31, 2000

To apply for licensure on the basis of a grandfather/waiver, applicant must show proof of being actively engaged as a locksmith or as a supervisor, manager, or administrator of a locksmith business for 3 years out of the 5 years immediately preceding January 1, 1996.

The following documentation must be submitted with the 4-page application and required fee.

1. **WH (Work History)** - This form is to be completed by all applicants.

2. **VE-LOC (Verification of Employment/Experience)** - This document must be completed to provide documentation of your employment/experience. This document must be completed by the appropriate supervisor and returned directly to the Department of Professional Regulation by the supervisor.

**If you are self-employed, complete the entire VE-LOC and submit at least 3 affidavits from colleagues attesting to the experience listed on the VE-LOC form.**

The VE-LOC is required from EACH supervisor verifying locksmith experience. You are authorized to photocopy the number of forms needed to appropriately verify the number of years of work experience necessary to complete the licensure requirements for your licensure method.

3. **CT (Certification of Licensure)** - If you hold a license or a registration as a locksmith in another state(s) or territory(ies), this supporting document must be completed by the jurisdiction of original licensure and the jurisdiction of current licensure where you predominately practice. You are authorized to photocopy the form if necessary. You must direct the licensing agency/board to return the completed document directly to the address indicated in number 7 below.

4. Proof of at least \$1,000,000 of liability insurance must be submitted using Supporting Document **DE-INS**.

5. Submit 2 photographs (approximately 1" X 1") taken within three (3) months preceding application submission which reflects current appearance. Please print your name on the back of your photographs.

6. **Security clearance must be obtained before the license is issued.** See Note, Item b) under Step 3 on the front of this Instruction Sheet for directions on this process.

7. The four-page application, supporting documentation and fee must be mailed to the Department of Professional Regulation, P.O. Box 7007, Springfield, Illinois 62791. These documents **MUST BE POSTMARKED BETWEEN SEPTEMBER 1, 2000, AND DECEMBER 31, 2000.** Applications post-marked after DECEMBER 31, 2000, will not be considered for application under the grandfather/waiver provisions.



S E P T E M B E R 2 0 0 0

# Letters

*The National Locksmith* is interested in your view. We do reserve the right to edit for clarity and length.

## **In Memory of James P. Rushing, CML (April 28, 1936 - June 20, 2000)**

The entire Locksmith Industry suffered a great loss on June 20, 2000 with the sudden death of James "Jim" Rushing of Bossier City, Louisiana. Jim was born on April 28, 1936 in Wills Point, Texas. He served our country in the Air Force during the Vietnam War. MGSgt Rushing retired after 22 years of service. He owned and operated Barksdale Key and Lock Service since 1978 and was a Certified Master Locksmith. An expert teacher in his trade, he traveled all around the country to share his love and knowledge of locksmithing with others in the industry. He was a member of the Texas Locksmiths Association, ALOA, Lou-Miss Locksmiths Association and the Ark-La-Tex Locksmiths Association. Jim was an avid fisherman and loved to go camping. He was also a ranger at Cypress Black Bayou.

Jim Rushing believed in education, and helping his fellow locksmiths. He was a Certified ALOA instructor and taught wherever and whatever he was asked to teach. Thousands of industry members have benefited from his teaching over the years. Jim was a tireless worker who was instrumental in successfully raising of money and generating support for our fight in Texas against the Alarm Industry's incursions into locksmith work.

Jim was a favorite leader in Texas, known for his good humor, wisdom, ability, and willing personality. He could inspire a group of locksmiths to greatness and unity one minute and have them rolling in the isles from his humor the next.

We may mourn his death, but we should all rejoice in his accomplishments in life. To have known Jim Rushing and witnessed his passion of teaching and his love of locksmithing was truly a blessing.

He served on the board of directors of the Texas Locksmiths Association for many years, serving as President for two. He was instrumental in organizing the "Texas Locksmith Legislative Action Committee", which sought out and fought against locksmith legislation in Texas. Jim was awarded his life membership in TLA in 1999 in recognition of his outstanding service. He was a past recipient of the esteemed Texas Longhorn Award and the George Robbins Memorial Education Award.

Jim assisted in the organization and operation of the Ark-La-Tex Locksmiths Association, which he also served as President.

The memory of Jim Rushing will always bring a tear to my eye and a smile to my face. I remain in awe of his dedication and leadership as one of our own.

*Judy Clifford*

## **Security Network Headaches**

I am having a problem with a certain Corporate Service Network. They promise everything but do not deliver. I was told that upon completion of the work they would pay via company credit card. All I had to do was fax a copy of the invoice. After repeated phone calls,

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we were paid two months later by company check. Another company to be wary of is Nation-Wide Security based in Downey, California. We billed them on 30 day net. It is now 40 days past and still no payment. These national security companies want prompt, professional service, but they do not want to pay in a



prompt or professional manner. We will no longer take calls from Corporate Service Network, Nation-Wide or Coach-Net for these reasons.

*Rick Madden  
Washington*

## **Cracking Bugsy's Safe**

Just as the Al Capone Vault was opened by Geraldo Rivera on TV several years ago, a safe once owned by Bugsy Siegel was opened recently on live television by In -A-Floor Safe Company. Why by In -A-Floor Safe Company? It turns out that we were the manufacturer of the safe in question. Bugsy Siegel rented office space from the owner of the Formosa Café in Hollywood. He and Mickey Cohen purportedly ran a numbers racket and prostitution ring from that office. A model C-2 In -A-Floor safe had been installed in the floor of his office during that time. After he was murdered, the safe was forgotten and not seen until a recent renovation of the restaurant. Thanks to our nameplate being on the safe, we were contacted to see if we could get the safe opened and date the safe to verify its use by Bugsy. Upon opening the safe - which unfortunately was empty - we were able to place a manufacturing date of approximately Jan. 1947, just five months before Bugsy met his demise.

**TNL**



# AUTO ENTRY SETS *from* HIGH TECH TOOLS



Domestic and import access manuals.



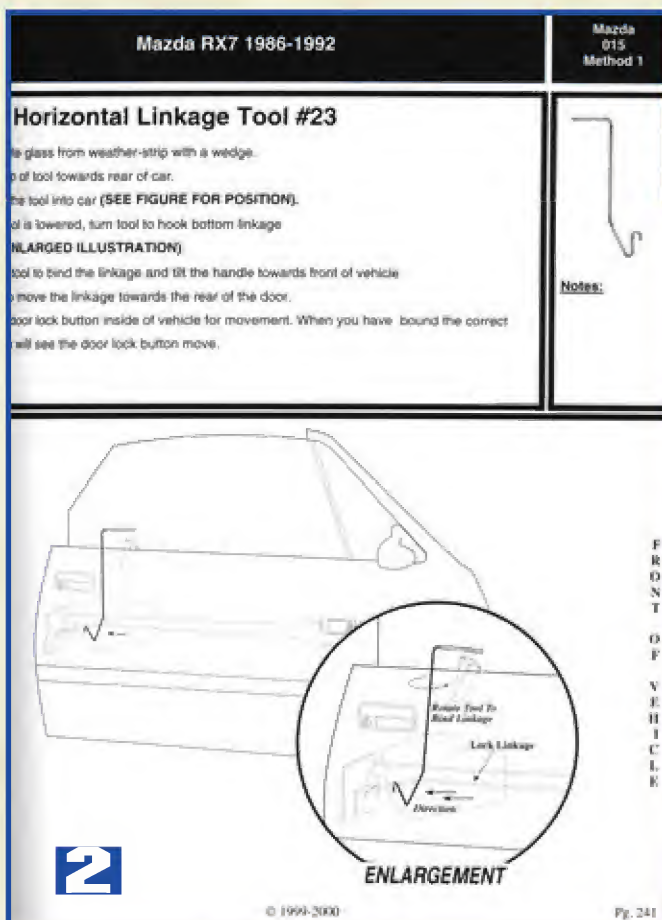
by  
Richard  
Allen  
Dickey

*Every year High Tech Tools adds additional vehicle information to their new model auto lockout sets. Often they include new tools and new accessories for their sets. Although this year is no exception, it will prove to be their most extensive improvements to date.*

*High Tech Tools has five different lockout sets to choose from, starting with the 2000B base set up to the 2000SPRO Super Pro set. The prices range from \$99.95 up to \$399.95. Let me show you some of the improvements and additions that High Tech Tools has made for the Model 2000.*

This year there are five manuals available with the Model 2000. The Domestic and Import Access Manuals (see photograph 1) describe the best tool for entry, the best access point for the tool, a drawing of the linkages (see photograph 2) in the door and photographs (see photograph 3) of the actual opening process.

This year the manuals are made of a higher grade paper. In the past, the paper quality was the only thing that you could complain about. Now the paper is much less likely to tear and easier to write on when making notes. The two manuals combined have over 1100 pages of opening information.



Suggested tool, instructions and drawing of the inside of the door.



**Photographs of the actual opening process.**

**Information manual.**

**Example of the information inside the information manual.**

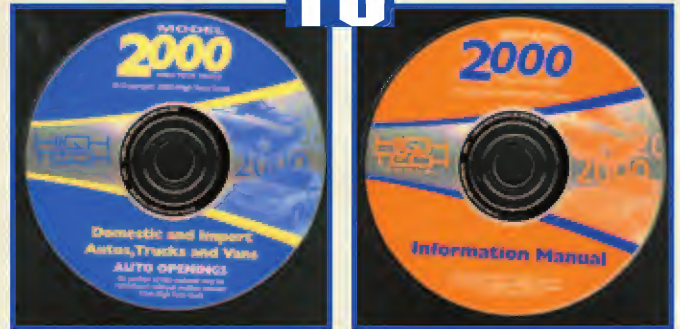
**Transponder manual.**

**Example of the information inside the transponder manual.**





Door panel and side air bag manual.



The two CD-ROMs that include all of the printed information.



Startup page from the access manual on CD-ROM .

# Air Bag Manual Listing

9

## Acura

Model	Model	Year Span	Body Style	SAB
Acura	TL	1997 - 1999		No Side Air Bag
Acura	Integra	1994 - 2000	2 door	No Side Air Bag
Acura	Integra	1994 - 2000	4 door	No Side Air Bag
Acura	NSX	1991 - 2000		No Side Air Bag
Acura	RL	1999 - 2000		Side Side Air Bag
Acura	MDX	1996 - 1999		No Side Air Bag
Acura	TL	1999 - 2000	4 DOOR	No Side Air Bag

## AM General

Model	Model	Year Span	Body Style	SAB
AM General	Hummer	1997 - 2000		No Side Air Bag

## Audi

Model	Model	Year Span	Body Style	SAB
Audi	A4	1994 - 2000	Sedan	Seat Side Air Bag
Audi	A4	1994 - 2000	Wagon	Seat Side Air Bag
Audi	A6	1994 - 2000	Sedan	Seat Side Air Bag
Audi	A6	1994 - 2000	Wagon	Seat Side Air Bag
Audi	A8	1996 - 2000	Sedan	Seat Side Air Bag
Audi	A8	1996 - 2000	Wagon	Seat Side Air Bag
Audi	Audioline Multitask			Seat Side Air Bag
Audi	S4	2000		Side Side Air Bag
Audi	T7	2000	2 DOOR	Seat Side Air Bag

## BMW

Model	Model	Year Span	Body Style	SAB
BMW	3 Series	(ALL)		Side Door Air Bag
BMW	5 Series	(All Years)		Side Door Air Bag
BMW	7 Series	All Years	4 door	Side Door Air Bag
BMW	8 Series	All		Side Door Air Bag
BMW	M3	All Years		Side Door Air Bag
BMW	M5	(All Years)		Side Door Air Bag
BMW	Z3	1999 - 2000		Side Door Air Bag

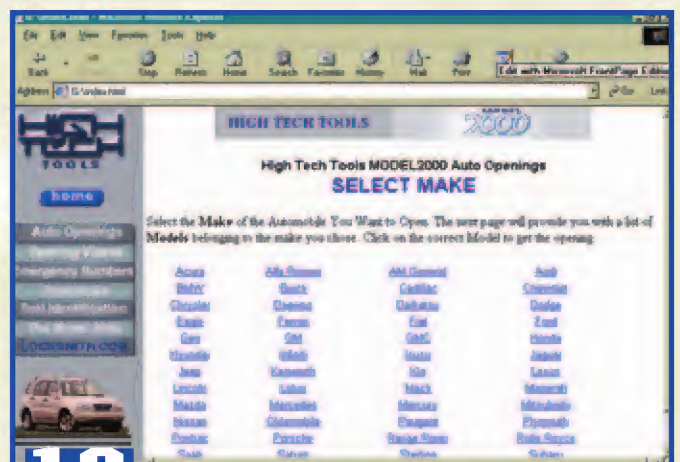
## Buick

Model	Model	Year Span	Body Style	SAB
Buick	Century	1997 - 2000	4 door	No Side Air Bag
Buick	LeSabre	1991 - 1995		No Side Air Bag
Buick	Park Avenue	1998 - 2000		Side Side Air Bag
Buick	Royal	1999 - 2000		No Side Air Bag

## Cadillac

Model	Model	Year Span	Body Style	SAB
Cadillac	Catera	1997 - 2000		Side Air Bag Sewer In Door
Cadillac	De Ville	1994 - 1999	4 door	Side Door Air Bag
Cadillac	De Ville Classic	1994 - 1999	4 door	Side Door Air Bag
Cadillac	Deville	2000	4 door	Side Side Air Bag
Cadillac	El Escalade	1995 - 2000		No Side Air Bag
Cadillac	El Escalade Sport Coupe	1992 - 2000		No Side Air Bag

Example of the information inside the door panel and side air bag manual.



Tools available with Sure Grip™ handles.





Double ended tools.



Sure Grip™ handle close-up.



The Super Jack set.



The Air Jack.

The Information Manual (see photograph 4) provides information on key blanks, (see photograph 5) lock rotation, depth and space information as well as a part replacement guide. It is almost 200 pages in length.

The 248 page Transponder Guide (see photograph 6) is loaded with useful information. As you may know, some of the transponder equipped vehicles are only programmable by the dealer. Most require special equipment. Only a few models can be programmed by the locksmith without a special tool. This guide will tell you if you need a tool, the dealer or just a special key blank. (See photograph 7)

Over the past few years, side airbags have scared a few locksmiths. The 64 page Door Panel and Side Air Bag Information Manual (see photograph 8) should put your mind at ease. Provided in this manual is a list of cars with side airbags. (See photograph 9) It also tells if the airbag is located in the door, a pillar or in the seat.

If you are one of the lucky ones and have a computer in your service vehicle, the manuals are available on CD-ROM as well. (See photograph 10) That's right, everything that is printed on paper is also available on two CD-ROM disks. For those of you familiar with computers, it utilizes an HTML interface instead of a PDF format. For those of you not familiar with computers, the information is not viewed like you would see it in a book. It is viewed like you would see it on the Internet. (See photograph 11.) You click on a topic and you are there. (See photograph 12.) Remember, since you are using a CD-ROM, all of the access is extremely fast.

Shifting from manuals to tools, the model 2000 has about 40 tools in all. The Pro and Super Pro sets come with chrome tools. The chrome tools are definitely the way to go if you work in a wet environment. After four years of locksmithing in Alaska, I am sold on chrome tools.

Some of the tools included in the lockout set have a tool end and a handle end. (See photograph 13.) Others are considered double ended tools. (See photograph 14.) The 12 tools with only one business end are available with Sure Grip™ handles. (See photograph 15.) The handles do provide a lot better gripping area than the tools without the handles. Some may say big deal, but for those with arthritis or injuries, those larger handles can help a lot.

The Ultra Jack 2000 set is an expanded remote access system, designed with emergency openings in mind. (See photograph 16.) Although the Ultra Jack set is capable of quickly opening almost anything, High Tech Tools points out that the Ultra Jack set is not a substitute for a complete auto opening system and should be used only for emergency openings.

The set includes regular and heavy-duty long rods that can be screwed together. There are also some special wedges, protective materials, an air wedge (see photograph 17) and a special pry tool (see photograph 18). The pry tool is called the Ultra Jack Tool and is designed to start the prying process. The business end of the tool will fit nicely between a door and door frame. Used in combination with a rubber wedge for leverage, the pry tool is very effective. (See photograph 19.)

After the door is pried open slightly, a wedge and the Air Jack can be inserted to further pry the door. The idea is to use these pry tools and wedges just enough to allow access of the long rods. The rods allow you to reach inside and pull the door handle or push a lock button.





**18**  
The Super Jack pry tool.



**19**  
The pry tool and a rubber wedge used together.



**20**  
Extended light probe.



**21**  
Assortment of wedges.

Two different probe lights are available. The regular probe light is included in the 2000PRO while the extended probe light is included in the 2000SPRO set. (See photograph 20.) Either light is available as an accessory to the other sets.

Wedges are another important part of a lockout set. Several types are included with the 2000SPRO set. (See photograph 21.) There are two hard plastic wedges, two rubber wedges and a double wedge. Between these three different types of wedges, you will have something for almost any occasion.

There is a hard case and a soft case available for tool storage not including the see through case for the Ultra Jack 2000. There is also a new product called the hard case organizer. (See photograph 22.) The idea behind the organizer is to keep the tools from becoming tangled with each other while stored in the hard case. There are multiple

pockets on the inside and outside of the organizer as well as Velcro straps to hold things in place. (See photograph 23.)

Every year auto manufacturers try a little harder to block the locksmith, so every year High Tech Tools includes a videotape with the order of a complete set of tools. This year the video shows close to 30 different 2000 model autos and how to enter them.

If you are looking for a new lockout set the Model 2000 lockout set from High Tech Tools is definitely one to consider.



**22**  
The hard case organizer.

For more information about High Tech Tools call: 800-323-8324. Circle number 307 on the Rapid Reply Card.



**23**  
The hard case organizer open.

TNL





# The 1999 Ford Police Interceptor

**Part I**

by Alan Morgan & Michael Hyde

The 1999 Ford Police Interceptor is a special high performance version of the Crown Victoria. The Police version does not have a transponder, but the regular Crown Victoria does have it as standard equipment. Both models use the new Ford 8-cut lock system and one key fits all locks. This vehicle has been very popular since Chevrolet has temporarily suspended production of the Impala/Caprice which could be special ordered as a Police version. The new Impala will be re-introduced for the 2000 model year.

## Ignition Lock



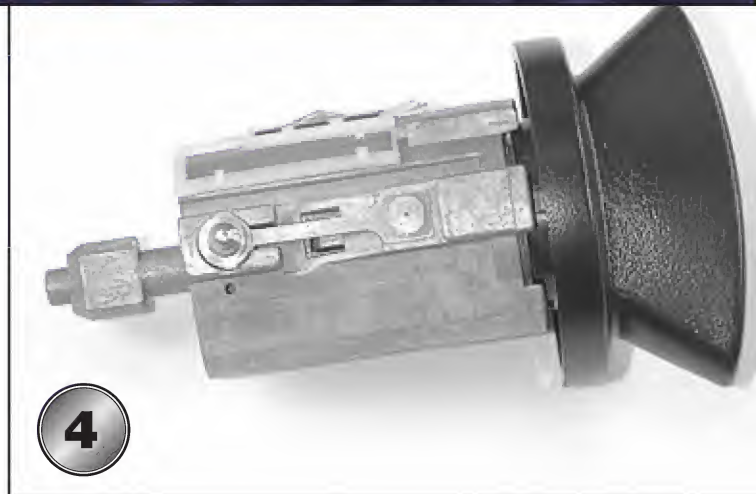
The ignition lock on this car is the new Ford 8-cut system, one key car. As with almost all 8-cut lock ignition's there is an active retainer that can be accessed through the column shroud.





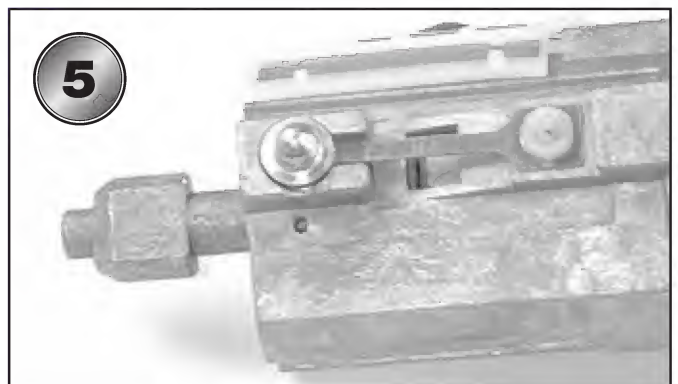


Turn the ignition lock to the "ON" position and depress the active retainer to release the ignition lock.

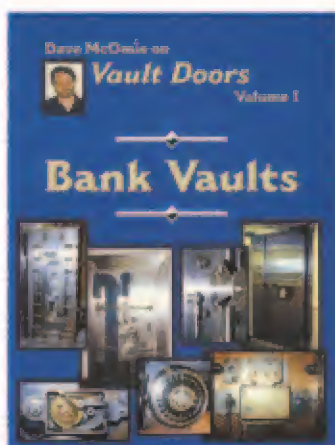


A view of the ignition lock removed from the car.

To disassemble the ignition lock rotate the plug clockwise until it stops and then gently slide out the active retainer from the lock housing. Use a very small pin to push in the plug retainer allowing the plug to rotate further. Watch out for the spring-loaded ball bearing retainer, as it will want to shoot out through the cavity you just took the active retainer out of.



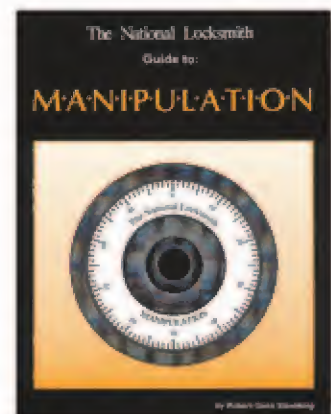
## Dave McOmie on Vault Doors Vol. 1 & 2



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#VD - 1, VD - 2

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#MAN - 1





The ignition lock has 7 tumblers in positions 2 through 8.

#### Door Lock



**CAUTION:** To work on this car you will need a very large Rivet gun to replace the door handle rivets. You will need a rivet gun that can handle a 1/4" rivet or larger.



To service the door locks it will be necessary to remove the inside door panel.



Use a small screwdriver to gently unsnap the plastic trim cover surrounding the inside door release lever.



Behind the trim cover is an additional panel screw that must be removed.





11

The power window and power door lock control switches are mounted into a trim pad on the door. Use a small wooded wedge to raise (unsnap) the trim pad from the rear.



14

On the rear edge of the door panel is another panel screw that must be removed. Also remove the panel screw on the very bottom of the panel (not pictured).



12

Remove the three screws holding the electronic switches to the trim pad.



13

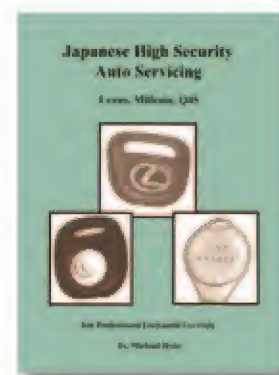
Once the switch trim pad is removed there is another panel screw exposed that must be removed.

## Japanese High Security

Some of the most profitable cars are also the trickiest to work on.

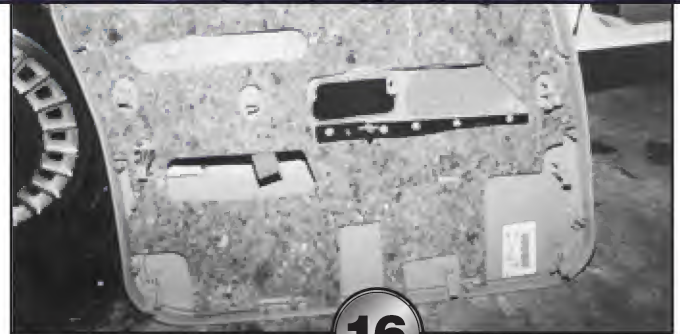
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#JAP - 1

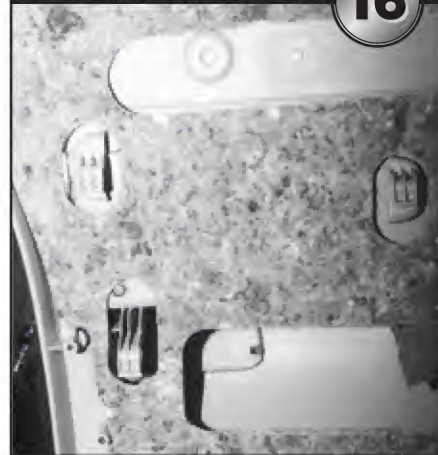




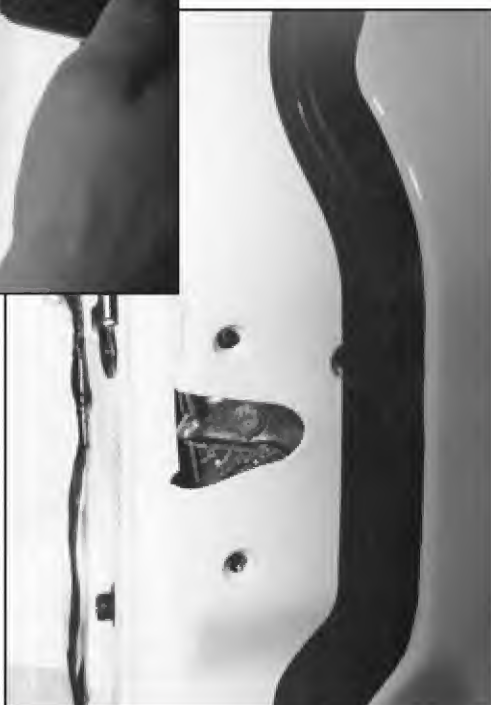
Now that all the panel fasteners have been removed, you can remove the door panel. The best way to do this is to use the panel pull to lift up on the panel. Since the panel does not use any snap-in clips you have to pull up on the panel to remove it.



Here is a look at the panel and the type of fasteners it uses.



Remove the two screws that hold on the latch mechanism, this will make removing the linkage rods easier.

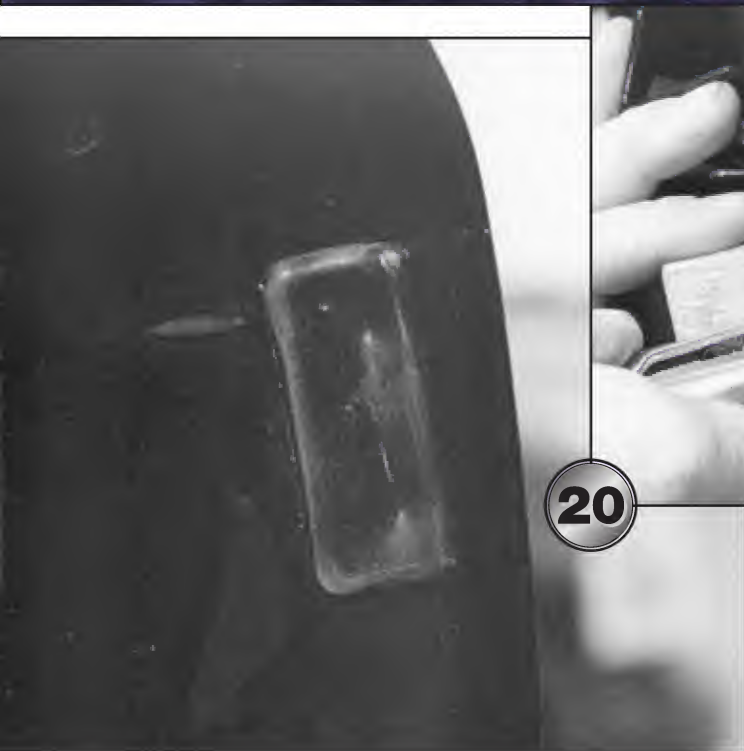


There is a plastic weather film sheet that must be pulled back to work inside the door. Gently peel it back and be careful not to tear it.



The linkage rods are not shielded.

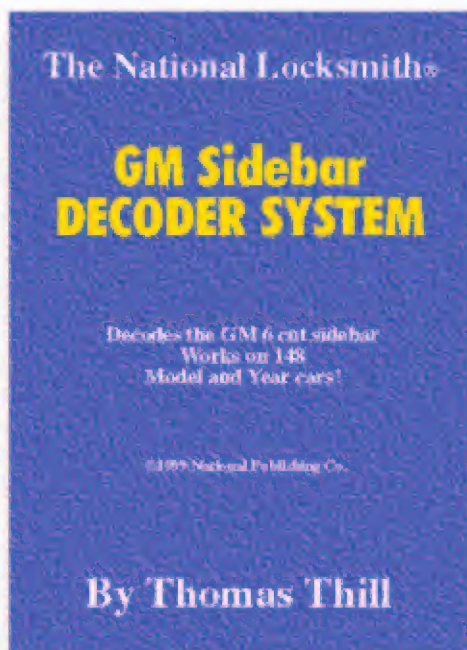




There is a metal lock-retaining clip on the edge of the door that needs to be removed. We found the least damaging way to do this is to use a small wooden wedge and a pair of vise-grips to get the metal clip out. The vise-grips can use the wooden wedge to force the clip out instead of the edge of the door, which would scratch the paint on the door.



The  
metal clip  
removed.



## GM Sidebar Lock Decoder System

Tom Thill, the author of a new book, has invented an amazing new way to make keys for six cut GM Sidebar Locks.

[CLICK HERE TO LEARN MORE](#)



#TT - 1





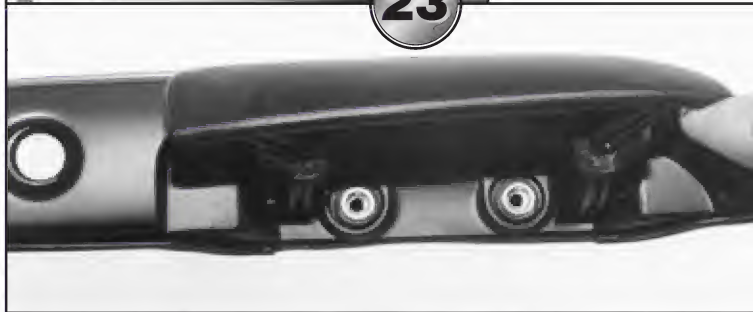
The outside door handle is where the real work is on this car. Lift up on the handle and you will find two large rivets holding the handle on.

22



Take a pin punch and knock out the centers of the rivets.

23



24

Once the centers of the rivets have been knocked out you can use a drill with 9/32" bit to remove the rest of the rivets.



25

You now have a choice to try and get the lock cylinder out of the door by trying to move the handle out of the way or to just disconnect the linkage rod going to the handle and pulling the handle completely off.



26

We chose to remove the handle entirely.



27

Disconnect the linkage rod from the door lock.





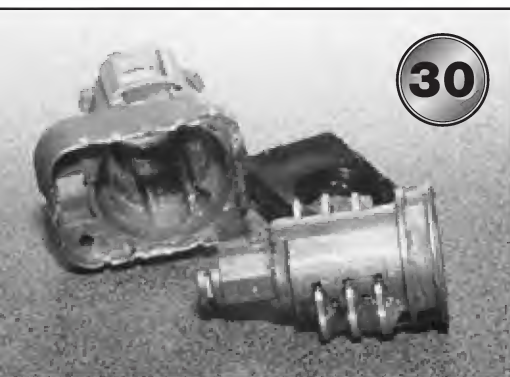
28

The door lock is a real piece of work to get apart. To get the plug out you have to remove the black plastic spacer in front of the plug. The problem is that the spacer is held in by sections of the lock housing that have been crimped over it.



29

We put the lock in a vise and used a pin punch to knock back each individual crimping.



30

Here is a view of the lock cylinder disassembled. The lock contains six tumblers in positions 1 through 6.



31

We had to use a special rivet gun to put back in the new rivets. Be careful using this rivet gun, don't let the gun slip or you could scratch the paint going all the way down the door. Wouldn't that be fun?

*Next month we conclude with the decklid lock, glove box lock and specifications.*

TNL

## Safe Opening Volumes 1-5



These are the classic safe books you will need to open most any safe easily and professionally.

- Volume 1 - Modern Safes
- Volume 2 - Modern Safes
- Volume 3 - Antique Safes
- Volume 4 - Antique Safes
- Volume 5 - Very Recent Safes

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#SO - 1, SO - 2, SO - 3, SO - 4, SO - 5



# AUTOMOTIVE NEWS

## Events In Automotive Technology



Illustration A.

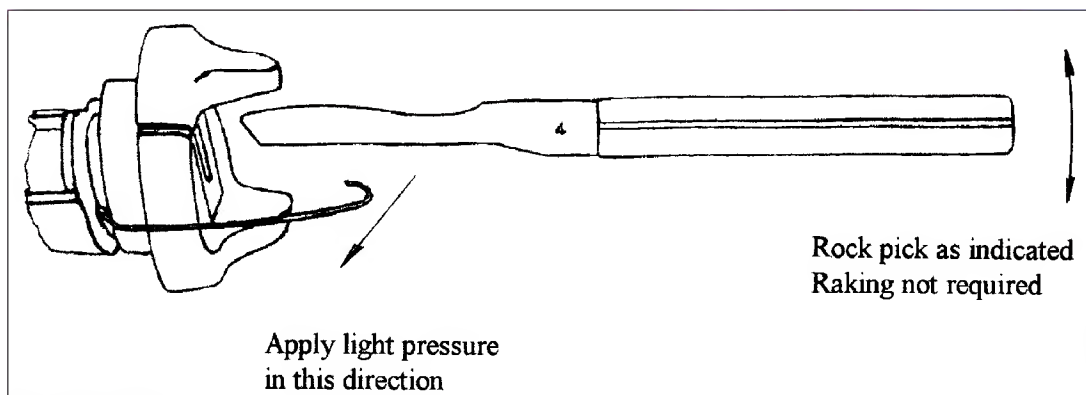


Illustration B.

### Somerset Security and A-1

Last October, Somerset Security, a division of Atlantic Power, purchased A-1 Security Manufacturing. This combination of forces has created a powerhouse of expertise for the automotive locksmith.

Prior to the merger of A-1 and Somerset, the parent company, Atlantic Power, was the major East Coast marketing arm for STRATTEC Security. A-1 has been making locksmith tools and key machines for over 25 years.

While A-1 offers only two generic car opening tools, it manufactures a plethora of automotive tools, picks, and its PAK-A-PUNCH Code Cutter. Somerset Security, the newly formed parent company has recently introduced its own VATS key.

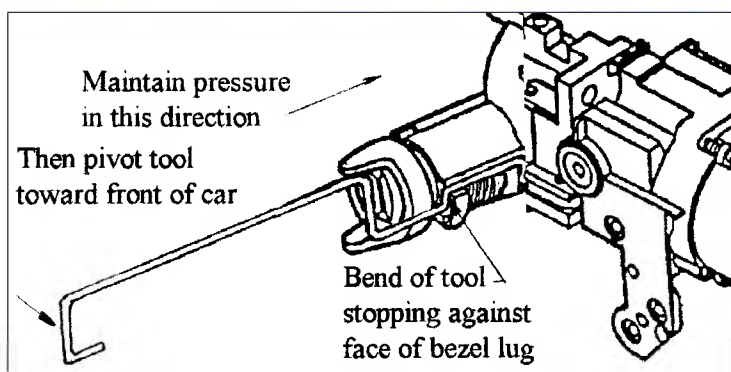
According to Ricky King, Manager of Research and Development for A-1, "With more sophisticated electronics and increasingly more wiring inside the door cavities, we do not see a future in car opening tools; other manufacturers are doing a great job developing tools and manuals. Our focus remains in the development of tools and methodology for picking and decoding automotive locks - doors, trunks and ignitions."

### Picking and Decoding GM 10-Cut Column Mounted Ignitions

Several years ago, A-1 introduced its flagship picking tool, the #PS2 Pick and Decoding set for GM 10-cut. (See illustration A.) With this unique set of tools, experienced locksmiths can pick and decode column mounted GM 10-cut ignitions in just a few minutes.

The first step involves the use of a sidebar pressure tool that





**Illustration C.**

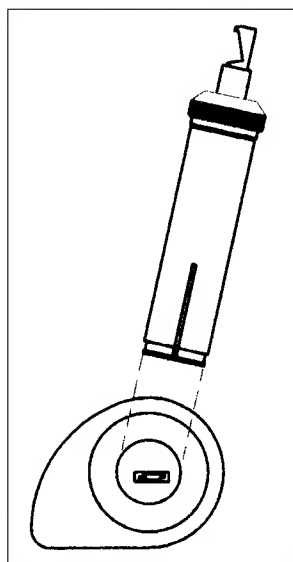


**Illustration D.**

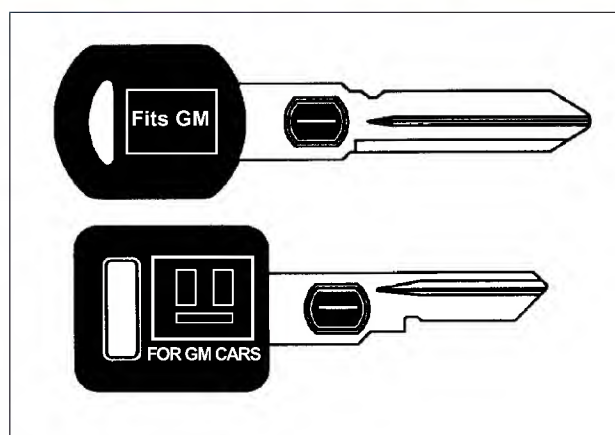
conveniently fits between the ignition lock plug and the cylinder housing. Once the pressure tool is inserted tension is automatically applied to the side bar. (See *Illustration B.*)

Once the pressure is applied, the ignition can be picked using one of four rocker picks. My experience indicates that the #4 pick is the most universal. If the lock cannot be picked with your first choice of the four picks, move on to another one. Generally this lock can be picked within seconds, even if there is a need to switch picks.

With the lock in the "on" position, use the 'lock cylinder release tool' to fully remove the cylinder. (See *illustration C.*) Once the cylinder is removed, the code can be read from the housing, or the wafers can be decoded with the decoder tool (included).



**Illustration E.**



**Illustration F.**

### **In-Dash Ignitions**

A-1 also manufactures a set of tools for defeating and decoding the in-dash version of GM's 10-cut lock. While there are not a lot of vehicles using this In-dash mounted ignition, the alternative procedure, which involves removal of the dash is quite time consuming. Because of the significant time savings, this tool will more than pay for itself in the first job.

A-1's #PS3 Pickset is very similar to the #PS2 for 10-cut column mounted locks. (See *illustration D.*) The major difference is that A-1 provides a specialized "removal tool" for safely removing the bezel and the face cap. Both parts remain intact and can be reused. After removal of the face cap, (see *illustration E*) a 3/32 pilot hole is drilled into the face of the ignition plug and the tension tool is inserted into the pilot hole. The original face cap and bezel will be replaced and no evidence of the 3/32 hole will be evident. Like its sister product, a cylinder release tool and a decoder are included.

This lock is slightly different than the column mounted lock so a different set of Rocker Picks is included.

### **Picking and Decoding Ford 8-Cut**

A-1 has just announced a new set of tools for picking and decoding the Ford 8-cut ignition. According to the company, this set of tools will function similarly to the #PS3 GM in-dash model. An additional bonus is that the double-sided rocker picks will work for many other locks, including some foreign door and trunk locks.

### **VATS Keys**

Somerset Security, A-1's newly formed parent company has introduced its own version of the popular VATS key. (See *illustration F.*) High quality single and double-sided versions are available from distributors nationwide. Watch for more high security keys from Somerset.

### **Strattec 2001 Product News**

For 2001, DaimlerChrysler, Ford and General Motors have made a number of changes to their vehicles that affect the locks and keys. The most significant of these changes are listed below.

### **DaimlerChrysler**

All of DaimlerChrysler's keys are changing for 2001. The Pentastar logo will no longer appear on the keys, and will be replaced by specific vehicle logos. As in the past, all RFID keys are gray and all non-RFID keys are black



### **2001 DaimlerChrysler Vehicles with Smart Keys**

DaimlerChrysler has increased the number of vehicles employing Smart keys. The 2001 vehicles using these keys include:

- Chrysler 300M (100%)
- Chrysler Cirrus (option)
- Chrysler Cirrus Export (100%)
- Chrysler Concord (option)
- Chrysler Concord Export (100%)
- Chrysler LHS (100%)
- Chrysler PT Cruiser (option)
- Chrysler PT Cruiser Export (100%)
- Chrysler Sebring Convertible (option)
- Chrysler Sebring Convertible Export (100%)
- Chrysler Sebring Coupe (100%)
- Chrysler Town & Country (option)
- Chrysler Town & Country Export (100%)
- Dodge Avenger (100%)
- Dodge Caravan (option)
- Dodge Caravan Export (100%)
- Dodge Dakota (option)
- Dodge Dakota Export (100%)
- Dodge Durango (option)
- Dodge Durango Export (100%)
- Dodge Intrepid (option)
- Dodge Intrepid Export (100%)
- Dodge Neon (option)
- Dodge Neon Export (100%)
- Dodge Stratus (option)
- Dodge Stratus Export (100%)
- Jeep Cherokee (option)

- Jeep Cherokee Export (100%)
- Jeep Grand Cherokee (100%)
- Jeep Wrangler (option)
- Jeep Wrangler Export (100%)

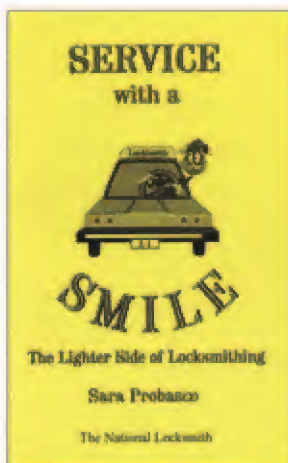
### **Dodge Avenger and Chrysler Sebring Coupe Lock & Key Change**

Mitsubishi Motor Company manufactures the Dodge Avenger and Sebring Coupe for DaimlerChrysler. These vehicles use DaimlerChrysler keys with Mitsubishi transponders. The Avenger key has a Dodge head and the Sebring key has a Chrysler head, but the rest of the key is identical to the 90 groove Mitsubishi key, and must be programmed as such. The easiest way to differentiate the Sebring and Avenger keys from other DaimlerChrysler keys is that they have an "R" stamped on the blade, just as the Mitsubishi keys do. These vehicles also utilize Mitsubishi locks in their systems, and therefore do not use DaimlerChrysler lock service packages or components.

### **New Body for the Chrysler Town & Country and Dodge Caravan**

The 2001 Chrysler Town & Country and Dodge Caravan have a new body style. As a result, the deck lock and sliding door locks have changed. The deck lock is secured to the van with a large plastic screw on the nut/washer assembly. The sliding doors now use a standard snap-in door lock (lock service package number 704275). The front doors still use the same locks as they did in 2000 (lock service package 702784).

## **Service with a Smile**

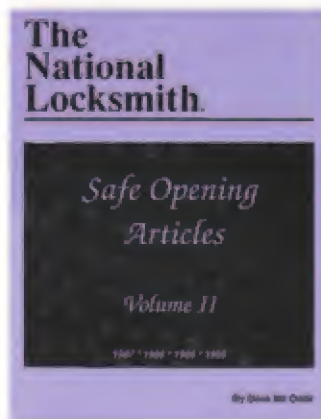


To tickle the funnybone of anyone in a service oriented business.

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#SWS

## **Safe Opening Articles**



Dave McOmie's original articles from when he first started writing for The National Locksmith are reprinted in this book.

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#SA - 2



### **New Ignition for Dodge Durango, Dakota, and Ram Van**

The 2001 Dodge Durango, Dakota, and Ram Van use a modular style ignition with a flag driver tail. Use lock service package 704650 to service this ignition.

### **Chrysler Cirrus and Dodge Stratus - New Deck Locks**

The 2001 Cirrus and Stratus are using a new deck lock. The lock service package number is 706183.

### **Chrysler PT Cruiser Lock Assemblies**

The PT Cruiser utilizes a door lock package with a detent design, similar to that of the Jeep Grand Cherokee. It also has a new lift gate which includes a zinc bracket (lock service package 705744).

### **Ford**

#### **PATS III Encrypted Transponder Keys**

In addition to the Ford Taurus and Mercury Sable, the PATS III Encrypted Transponder key is used on the 2001 Ford Ranger and Mazda B-Series trucks.

#### **Explorer Ignition and Door Locks**

The 2001 Explorer has incorporated new ignition and door locks. One of the more notable changes is that the Explorer has only two locks: the ignition and driver side door. These will be late model year releases.

### **Tonneau Covers**

Ford is including a factory installed tonneau cover as an option on its 2001 Explorer, Explorer Sport Trac, Ranger, and F150. All models except the Sport Trac use one tonneau cover lock. The Sport Trac uses two.

### **Mercury Villager and Nissan Quest Update**

The Villager and Quest no longer use right hand door locks or sliding door locks. Existing lock service packages will work with the new body style.

### **General Motors Trucks and Vans**

Several General Motors 2001 trucks and vans include seven tumblers in their door and deck locks. Previously, they had just five tumblers. As a result of this change, you will not be able to use 2000 or older keys on 2001 models. The affected models are:

- Astro (doors)
- Bravada (doors)
- Full Size Pickup (doors)
- Full Size Van (doors)
- Jimmy (doors)
- S-10 Blazer (doors)
- S-10 Pickup (doors)
- Safari (doors)
- Silhouette Export (doors and decks)
- Sonoma (doors)
- Suburban (doors and deck)
- Tahoe (doors and deck)
- Yukon (doors and deck)

### **Grand Prix**

General Motors has eliminated the valet key for the 2001 Grand Prix. However, you can still create a valet key if a customer requests it, as the valet system still exists within the vehicle.

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#TNL - CD1



# Quick Entry

## UPDATE

by  
Steve  
Young



### 1996-2000 TOYOTA RAV4

**W**hen the Toyota RAV-4 was introduced, it was on the leading edge of a new wave of smaller Sport Utility Vehicles (SUV's). (See photograph 1.) 2000 is scheduled to be the last year of production for the current body style RAV-4. The new RAV-4, to be introduced in 2001, will be slightly larger and based on the same platform as the 2001 Camry.

Like the rest of the Toyota products in production today, the RAV-4 uses the split-tumbler lock system. This system incorporates two split tumblers in each lock, located in the number 3 and 7 positions in the door and ignition locks. Unlike the split tumblers in high-security systems — like those used on Mercedes and BMW — each pair of split tumblers in the Toyota system are the same depth. Both halves of the split-tumbler pair rest in the same cut on the key, with each half resting on only the edge of the cut. This design is very sensitive to wear, on both the key and the tumblers. For this reason, the Toyota split-tumbler locks tend to require additional maintenance and require greater accuracy when duplicating keys than traditional solid tumbler locks.

In addition to the two split tumblers, the solid tumblers are of an unusual design that has each tumbler resting on the edge of the cut rather than completely across the width of the key. I suspect that this odd design was adopted specifically to prevent impressioning. This design also makes these locks relatively difficult to pick. I do not recommend making a key to one of these vehicles by the



1. The 1996  
Toyota RAV-4.



2. Wedge open the base of the window directly above the door handle. Use care not to damage the double-layer weather-stripping.



3. Position the tip of the tool just above the forward edge of the plastic guard and work the tip of the tool behind the inner door skin. Use the tip of the tool to push the hidden bellcrank forward to unlock the door.



4. When the tool is properly positioned, a small push forward on the tool will unlock the door.



impression method. Since the code number is stamped on the passenger side door lock, I prefer to pull the door lock and then make the key from code.

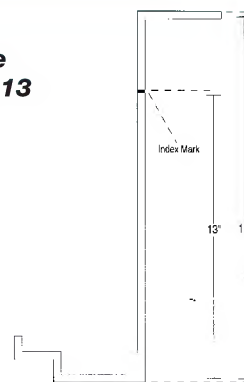
To unlock the RAV-4 using the TT-1013 tool, (see illustration A.) begin by wedging open the weather-stripping at the base of the window above the outside door handle. (See photograph 2.) Because this vehicle is equipped with double-layer weather-stripping, you will need to use caution while inserting your wedges. If the tip of your wedge is not properly inserted between the glass and both of the layers of the weather-stripping, the lower layer of the weather-stripping will roll under your wedge. This will greatly reduce your ability to insert the tool and the inspection light. In extreme cases, it may also damage the weather-stripping. If you insert a plastic card or plastic putty-knife between the weather-stripping and the glass, and then insert the wedge between the plastic card and the glass, you can make the job easier and eliminate the possibility of damaging the weather-stripping.

Once you have an opening into the door cavity, insert an inspection light

#### **Quick Reference Guide**

<b>Vehicle:</b> 1996-2000 Toyota RAV4	<b>Rear Door 1-9, Glove Box 5-9</b>
<b>Direction Of Turn:</b> Counter Clockwise (Pass. side)	<b>Code Location:</b> Passenger side door lock
<b>Tool:</b> TT-1013	<b>Primary Key Blank</b> Ilco/Taylor: X217, Curtis TR-47, Silca: TOY43, Jet TR47NP
<b>Lock System:</b> Toyota Split-tumbler	<b>Valet Key Blank:</b> Ilco/Taylor: X220, Curtis: TR-50, Silca: TOY44
<b>Code Series:</b> 10001-15000	
<b>Bitting:</b> Ignition & Doors 1-8,	

#### **A. The TT-1013 tool.**



and visually locate the diagonal plastic guard that protects the inside lock control linkage. (See photograph 3.) This guard is located slightly deeper in the door than the outside handle. After you have located the guard, insert the tool with the tip pointed toward the front of the vehicle. Lower the tool into the door and position the tip of the tool at the upper edge of the guard at the point where the guard disappears behind the inner door skin. Work the tip of the tool behind the inner door skin until the tip of the tool

rests against the rear of the hidden bellcrank. Pushing forward on the tool will move the bellcrank and unlock the door. (See photograph 4.)

Because the tool must be precisely positioned, I do not recommend attempting to unlock the RAV-4 without the use of an inspection light.

There is a solid frame around the entire window glass on the RAV-4. This allows the Tech-Train "Jiffy-Jak Vehicle Entry System" to also unlock this vehicle relatively easily. **TNL**



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#DMCD - 2





# SAFES & SAFE TOOLS



Adesco GS-5E Guest Safe

## Adesco GS-5E Guest Safe

The new Adesco "Guest Safe" is designed for hotels, dorm rooms or any application where temporary storage is a necessity. The GS's electronic lock operates with a standard hotel room configuration (Combo to open and combo to close). Additional features include manager override code, master override key, predrilled bolt holes, hand-felted false bottom, and guest card instructions.

## Advance Car Mover Company



Advance Car Mover Company

Badger Roller Pry Trucks are designed for easy handling of large, heavy loads such as safes. Used in pairs, they can lift (9" high) and move up to 10,000 lb. loads. Available from 4' lengths that fit easily inside vans, to 7' lengths with up to 5,000 lbs. lifting capacity each. Also available with extended nose plates or composite plastic, non-marring wheels

for use on finished floors.

## American Security Products New Product Line

American Security Products (AMSEC) has introduced a new line of gun safes. Improvements include a massive 1" door constructed of 1/8" inner and outer steel plates filled with fire insulating material, Omega Point tested in a gas furnace at temperatures up to 1200 for a period of 30 minutes (interior temperature did not rise more than 275 ), 14 active one inch diameter chrome-plated steel locking bolts, 4 way bolt work, auto-locking bolt detent system (holds



American Security Products New Product Line



Cashguard Time Lock





Fort Knox

bolts in the open position and auto-locks when the door shuts), attractive polished chrome/brass tri-spoke handle on high gloss models and new heavy duty L-handle on textured models, and four pre-cut anchor holes. There are two new paint finishes of beautiful green and satin black textured finishes.

### Cashguard Time Lock

The Cashguard Model BD2818 is designed to address the cash handling requirements of Convenience Stores. The upper receiving section is secured by the CSTB Time Delay Lock for hold-up protection. This lock features a large, bright digital display, which can be set to count up or down. The clock display will convey the time delay feature to potential robbers regardless of language spoken or literacy. The lower section used for change storage is secured by LaGard's 99E series time delay lock that is protected by an independent relocking device. The doors and front



Mossberg Instant Access Safe

are laser cut from 1/2" solid plate steel with the closest doorframe tolerance in the industry. For added pry bar resistance, the front is recessed into the body. Dual deposit slots allow for two different employees or shifts.

### Fort Knox

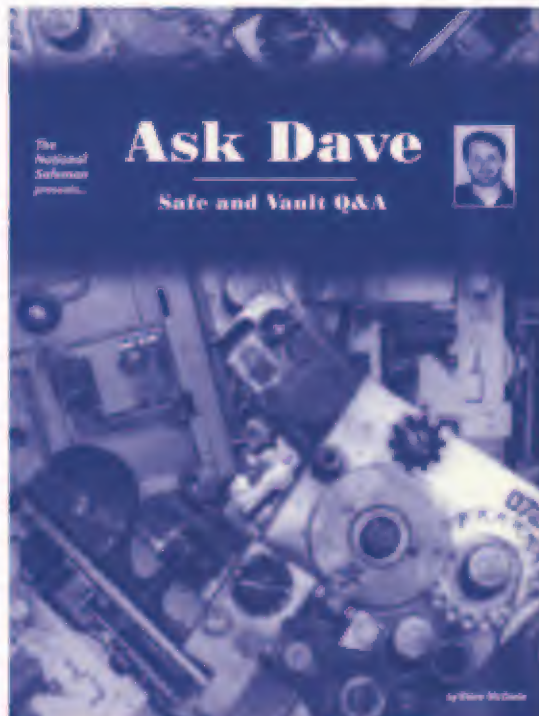
Fort Knox Security Products new Reinforced Fire Door adds a layer of fire protection to either

the 3/8" or 1/4" solid steel plate, then reinforces the door with an additional 10 gauge steel for added security (30% thicker steel than other composite type doors). This increases our fire protection to temperatures of up to 1680 over 90 minutes. The Reinforced Fire Door is standard on our Vault Door, Yeager and Titan series. It is available on all other Fort Knox safes as an option.

### Lockmasters has StrongArm Drill Bits

StrongArm Multipurpose Drill Bits have high grade, chrome-moly steel

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#AD - 1





RQ Associates Imaging Systems

that is completely secure. The Instant Access features a sturdy cast metal construction and a digital keypad with tamper alert alarm. Additional mounting plates, insert trays and accessories are also available to transport the safe from one location to another. For the most valuable valuables, trust InstantAccess.



S&G Comptronic 6150

shanks that have been tempered for extra durability, titanium tungsten carbide tips, and have an ultra high temperature copper braze which adds strength and reduces tip failure from over heating. Lockmasters stocks all diameters and lengths.

### Mossberg Instant Access Safe

For safe storage of valuable items, Mossberg brings you the InstantAccess safe. Designed by a veteran law enforcement officer, the InstantAccess is the only portable safe

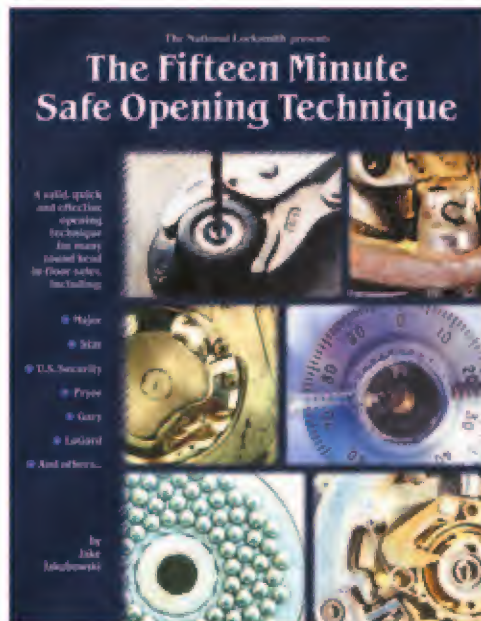
### RQ Associates Imaging Systems

A convenient, portable, high quality imaging systems that converts your borescope or fiberscope into a full color video display. It includes a base unit with built in 10-inch color monitor, a powerful illuminator, remote head camera with 2X zoom and a scope coupler. Simply connect your scope and light guide and you're ready for full color video display. Also available in a black & white 9 inch monitor (#MVBS-1M).

### S&G Comptronic 6150

The Comptronic 6150 operates as a stand-alone product or as part of an integrated system, and offers a broad range of applications to meet the security needs of any retail establishment. Features include time delay, duress and audit trail, and a special time lock feature to enable controlled access to two independently programmed safe locks.

TNL



## 15 Minute Safe Opening

This book deals exclusively with round head lift out doors. Shows five ways to open a Major; three ways to find the Dog Pin on a Major; four ways to open a Star; four ways to open a LaGard style round head.

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#JJ - 1





# Tubular Locks

by Bob Sieveking

Part Four



In previous articles we have studied the construction of a number of tubular lock cylinders, methods of disassembly, and the duplication of tubular keys. This article begins a study of the various picking methods and specific tools used to defeat tubular lock. Over the next few installments I will cover the various tubular picks available. The various picks used to defeat the tubular lock configuration are as unique as the locks they fit and the inventors that conceived them. Each brings its own advantages and limitations.

More than a method of defeating the tubular lock, the tubular pick is a method of interrogating the pins to

find the correct cut depths necessary to generate a working key for the lock. After all, when asked to open a tubular lock, it is in most cases because the customer does not possess a working key. The end result of the picking, then, should be to find the unknown cut depths and make a replacement key for the customer. All of the picks will have a tool or method of reading the pick, which can be used to decode the pick, and find the unknown cut depths.

In my research, I ran across an interesting table of manufacturers cut specifications. (See below.) This table shows the manufacturers dimensions for their keys. All cut depths are measured from the uncut portion of

the key tip to the bottom of the cut.

As we begin to read the picks and deduce the cut depths found in the various positions of the cylinder, it may be important to see the actual factory cut depths given by the manufacturers. With this information, it is a little easier to understand the necessity of making half cuts to produce a "smoother" operating key to a particular cylinder. This is especially important if your decoder or code cutting key machine is calibrated in Chicago depths. I believe that the majority of decoders will be calibrated to Chicago depths. Make adjustments accordingly when measuring the pick, and/or cutting the key by code. This will avoid the catches and binds experienced with a "mis-cut" key.

A second table of information you will find useful if you are forced to disassemble a cylinder to find the unknown cuts, is the table of tumbler lengths. (See top of next page.) This table shows the micro-meter lengths of the combining pins used by the manufacturers shown. This table doesn't exactly fit in with the theme of this article, which is picking and decoding the cylinder, but it will be found invaluable if disassembly becomes necessary.

Chicago	Greenwald	American	Fort	Dominion	Dynalock	Unican	Segal
(N/A) #0	N/A	N/A	X	N/A	— 5		
.0155 #1	.013	N/A	.017 #0	.016 #0	N/A	N/A	
.031 #2		.030 #1	.033 #1	.032 #1	.025 #4	.025 #2	.026 #2
.0465 #3	.043	.045 #2	.048 #2	.048 #2	.050 #3	.050 #3	.046 #3
.062 #4		.060 #3	.064 #3	.064 #3	N/A	N/A	.066 #4
.0775 #5	.074	.075 #4	.079 #4	.080 #4	.075 #2	.075 #5	.086 #5
.093 #6		N/A	.095 #5	.096 #5	.100 #1	.100 #6	N/A
.1085 #7	.104	N/A	.111 #6	.112 #6	N/A	N/A	.106 #7
(.124) #8		N/A	.126 #7	.128 #7	.125 #8	.125 #8	N/A
						increment.(step)	
.0155 --	.015		.016	.025	.025	.020	

Unican = Herculock.  
Taylor = Dynalock.  
Gem = Fort.

## HPC TLP-C Model "B"

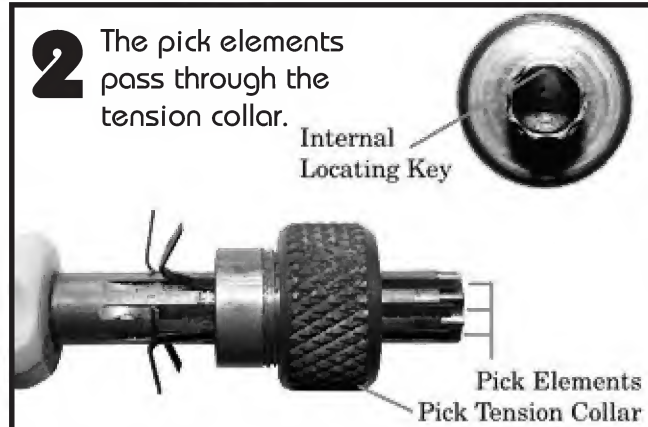


Pick Tension Collar

The HPC TLP-C "B" pick.

1

2 The pick elements pass through the tension collar.



Internal Locating Key

Pick Elements  
Pick Tension Collar



## - HPC Model "B" Pick -

The first pick we will study is the HPC Model "B" Centered tubular lock pick (TLP-C Model "B"). The pick is also available in Left and Right configurations, but the centered will be found to be the most useful. A great majority of the locks you will encounter will be centered configuration. *Photograph 1*, shows the HPC TLP-C "B" pick. It very much resembles a screwdriver because of the grip handle. The body of the pick is made of steel, machined to fit into the standard 137 tubular keyway. This pick bottoms against the rotor of the cylinder and uses seven moveable pick elements to manipulate the pins. The seven pick elements are made of .015" x .080" clock spring. They slide in grooves machined into the body of the pick. Fore and aft movement of the individual pick elements allow it to individually depress the seven combining pins of the cylinder.

Originally, this pick was made with a number of rubber bands around the pick body, in place of the tension collar. They held the pick elements in place and produced a preload or tension on the pick elements. This made them operate with a stiff but resilient pressure. Rubber bands deteriorated, lost their grip on the pick elements and had to be replaced periodically. The new design uses a pair of neoprene "O" rings inside the pick tension collar to tension the pick elements. By tightening the knurled nut of the tension collar, the "O" rings are compressed against the pick

#	Chicago	American	Fort	Dominion	Unican	Zipf	Lab	Segal
0	(.185)	-	.185 X	-	.175	-	-	-
1	.2025	.180	.202 0	.200 0	.200	.203	.204	-
2	.218	.195	.218 1	.216 1	-	.218	.219	.220
3	.2335	.210	.233 2	.232 2	.225	.234	.234	.240
4	.249	.225	.249 3	.248 3	.250	.249	.249	
5	.2645	-	.264 4	.264 4	-	.265	.264	.260
6	.280	-	.280 5	.280 5	.275	.280	.279	.280
7	.2955	-	.296 6	.296 6	-	.295	.294	.300
8	(.311)	-	.311 7	.312 7	-	-	-	-
<hr/>								
Pin Diameter:	.078	.094	.078	.077	.079	.078	.077	.094
<hr/>								
Bushing Height:	.185	.151	.185	unk.	.176	-	-	.188
<hr/>								
Drivers								
or Top Pins:	varies	.180	.201	.202	.175	.125	.125	.170
						.140	.141	
						.180	.180	

elements, and allows the same effect that was gained from the rubber bands.

The pick elements are "tensioned," or "pre-loaded" against free movement. Though there are no definitive instruction on the adjustment of the pick, it is very important to observe that the tension collar is tightened to a point that prevents the picks from moving easily. The function of pick tension is to overcome the springs in the cylinder. If the pick is too loose, the spring is able to push the pick element back as the pick is inserted. Keep the pick clean and avoid oil or grease. Proper tension on the pick elements is the key to achieving good results with this tool.

The tip of our pick is shown in *photograph 2*. In this detail, we can see that the pick elements pass through

the tension collar. The tip of the pick is machined to clear the combining pins of the lock. Only the flat tips of the pick elements contact the tops of the various combining pins. To pick the cylinder, it is necessary to put rotating force on the nose (and rotor) of the cylinder without obstructing free movement of the combining pins.

Note that there is no external key on the pick. The locating key is inside the barrel. As the pick is fully inserted into the cylinder, the locating key engages the keyway of the nose. This allows rotating force to be applied on the rotor, binding the combining pins at the shear line without putting side pressure on the combining pins. Because of the machining which allows clearance on the combining pins, the tip of the pick is fairly fragile. If too much torque is applied to the



## Lock Repair Manual

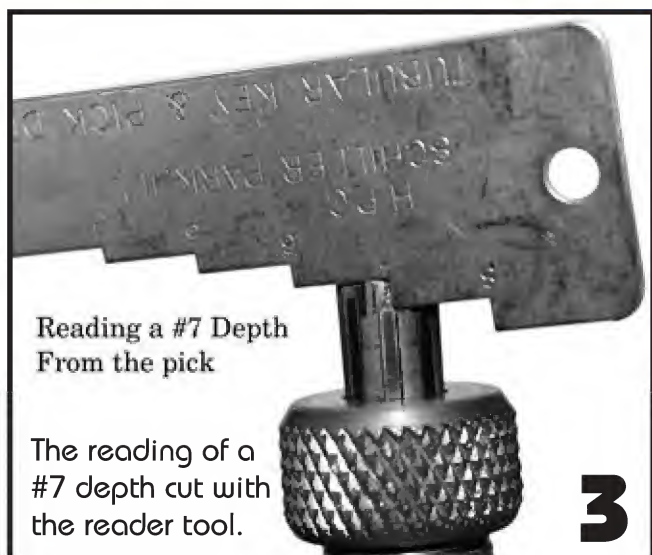
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#LRM - 1





tip, it will crack in the center of the key cuts.

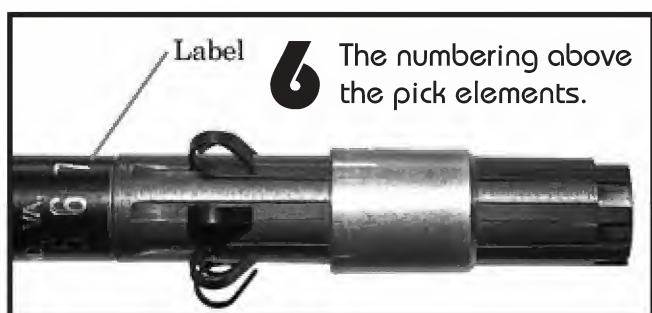
This is a stress or frustration crack, caused by impatience. As with all picking, tension is critical. The frustration grip is the cause of most tool failures.

### **- How does the pick work? -**

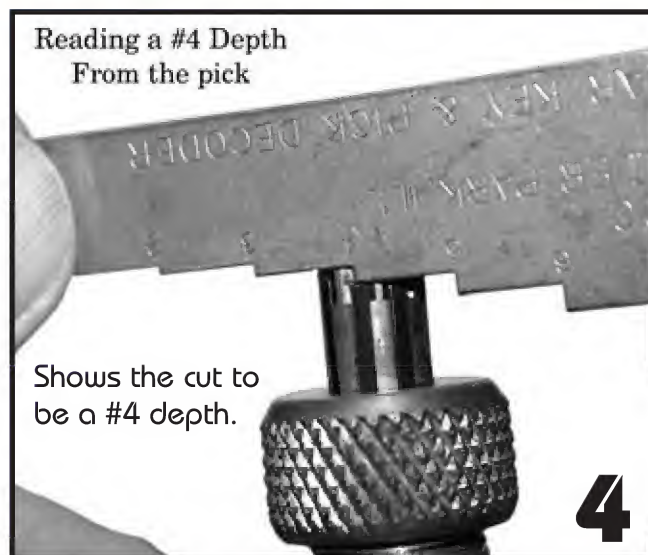
This tool is a "false key." It fits into the keyway and presents a resilient, but moveable force on all seven tumblers. It relies on the same principles that we are familiar with in impressioning. The tool impressions the cylinder. Binding force is applied with the handle and the cuts, by the action of the pick elements, will "impression" themselves to find the shear line.

### **- Pick Set-up -**

To set-up the tool, first insure that the tension collar is finger tight. For me, that is about as tight as you can make it with your fingers. Push all of the pick elements forward, past the tip of the pick by a few thousandths. To align the pick elements with the tip of the tool, push it against a flat surface. All of the pick fingers or elements will be forced even with the tip of the pick.



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This is a "0" depth (no cut).

### **- Inspect the cylinder. -**

1. Look into the keyway, to be sure that the pick is appropriate to lock you are going to pick. Ensure that it is the correct configuration (L-R-C) for your pick.

2. Are there any "dead pins? This pick does not bypass dead pins. It must bottom in the keyway.

3. Are the pins all free? Lubricate the cylinder if necessary.

4. If the cylinder is a cam lock on a metal door, press in on the door to relieve the locking cam. If there is too much tension on the cam, the lock will be more difficult to defeat.

5. Is this a cash box, secured by a long threaded rod, which draws the drawer into a cabinet? Ensure that there is some "free movement" in the nose of the cylinder. If the cylinder has been wrenched tight onto the threaded rod, you

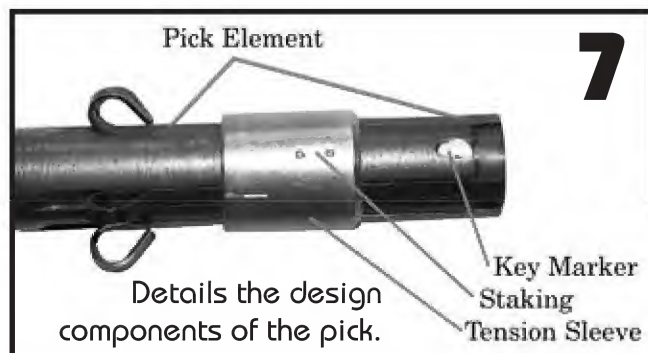


will not be able to pick it. Friction between the rotor and barrel caused by the threaded rod will not allow free movement. Push the drawer front inward to gain some free-play if possible.

6. Which way does the cylinder turn to open? Most tubular cylinders have enough clearance in the limiting washer to be picked in either direction. It, however, will only open in one direction.

### **- Insert the Pick -**

Insert the pick into the keyway. Ensure that it bottoms against the





8

Hold the tip of the pick flat against the decoder.

Reading a #7 Cut Depth

rotor. Observe that none of the pick fingers have backed out. If they have, remove the pick and tighten the tension collar. Reset the pick elements and insert the pick again. At this point, all of the combining pins will be forced to a zero "0" depth (no cut). Relieve the rotating tension on the pick handle and allow the springs to eject the pick from the keyway by the thickness of a dime (about .050"). Put turning tension on the pick handle and push the pick straight in. One or more of the pick elements will begin to move outward, indicating that a binding pin is "impressioning" a pick element deeper. Relieve the turning tension and allow the pick to lift out of the keyway as before, only the thickness of a dime.

Bind the rotor by turning tension and push the pick straight in. Insure that you are pushing straight into the cylinder. Be careful not to push or waver from straight or you will risk breaking the tip of the pick. Repeat

A Greenwald coin box.

11



Typical Greenwald Ultra Guard Coin Box

9

Reading a #2 cut depth. Observe that the pick element touches the top of the post.

Reading a #2 Cut Depth

### HPC TLP-Guard Pick



Pick Reset Lever  
Pick Tension Collar

10 The HPC TLP Guard pick.

bind and push "impressioning" technique, until the cylinder turns or until all of the pick elements reach maximum depth. If the first attempt fails, reset the pick, tighten the tension collar and begin again. Most cylinders will pick in the first pass if the tension collar is properly adjusted

Avoid over torquing the tool with a "frustration grip." Finesse will open the lock where force will fail. Locks are made to resist force. They can't resist finesse.

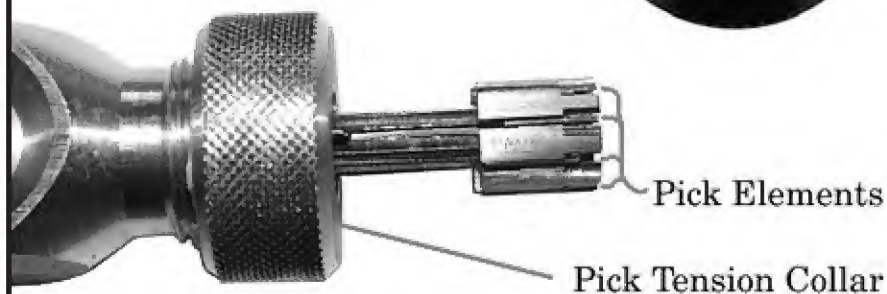
When the cylinder turns resist the

urge to open the lock. All we want to do is rotate the cylinder away from the key pull position. If you rotate the cylinder farther, it may relock in the next position and you will have lost the ground you have gained thus far. Rotate the cylinder to a "between cuts" position and stop. This is about 20 degrees away from the locked/key

12

The HPC TLP Guard pick tip.

Roll Pin



Pick Elements

Pick Tension Collar



pull position. At this point, we want to "accurize" the pick, without the influence of the cylinder springs.

Hold the pick straight (vertical) with the cylinder and push each of the pick elements into the cylinder. The top pins are captive in the rotor and the barrel of the cylinder forms a flat surface (between cuts) with the rear of the rotor. Push in on the pick elements and then push in on the pick, to insure that you are bottomed in the keyway. Leave the cylinder in the picked condition and carefully remove the pick from the cylinder. You now have a perfectly made impression of the desired tubular key.

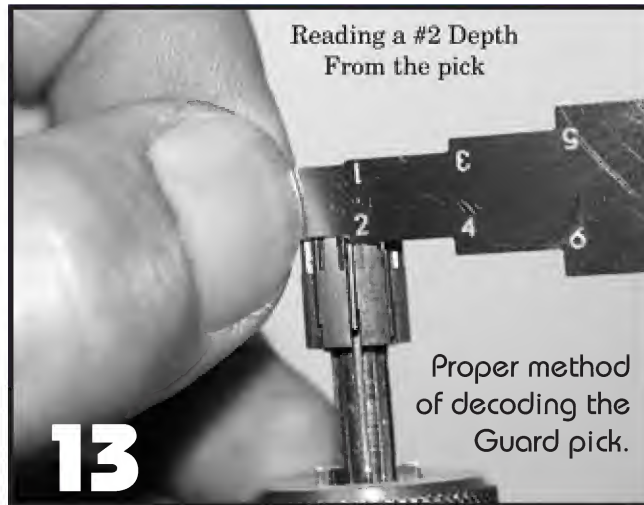
### - Read the Pick -

*Photograph 3*, shows the reading of a #7 depth cut with the reader tool. The bottom of the step in the reader which is held flat against the tip of the pick. The step just touches the tip of the pick element. Find the step in the reader tool that just touches the pick element and you will have the indicated depth. *Photograph 4*, shows the cut to be a #4 depth. With a good light, you should be able to discern the need for a half cut, using this gauge. A half cut is when one step is "just" too shallow, and the next allows an air gap between the pick element and the step gauge.

### - A-1 Security Manufacturing Tubular Pick -

The A-1 tubular pick, shown in *photograph 5*, is a handy compact pick. It uses the same impression principle that we found in the HPC pick, above. The tension sleeve conceals a neoprene "O" ring, that is captive and provides the pre-load tension on the pick elements. The handle is made of resilient rubber material, for a comfortable grip, and delivers plenty of torque for the picking process. A metal label, on the body of the pick is numbered to identify the seven pick elements. The A-1 pick is numbered using the Fort numbering convention, counter-clockwise. This matches their Herty Gerty cutting machine. *Photograph 6*, shows the numbering above the pick elements.

*Photograph 7*, details the design



components of the pick. The pick elements are made from .015" x .057" blued clock spring material. The Loop allows you to push the pick elements forward, to reset the pick or accurize the pick to a picked cylinder. The tension sleeve is "staked" in position, and is not removable or adjustable. There is a painted indicator at the tip of the pick, that shows the position of the internal locating key. Another thing to note, is the design of the pick tip. The entire tip is reduced in diameter, to clear the combining pins of the cylinder being picked. This feature allows the pick to enter keyways protected by dead pins between the combining pins. The wall thickness of the pick is .010", which makes the pick tip rather fragile.

### - A-1 Picking Procedure -

This pick is used in exactly the same manner as the above HPC Model "B." It relies on the tension of the tension sleeve to overcome the combining pin tension. The pick is

set to "0" depth, with all of the pick elements even with the tip of the pick.

Insert the pick carefully into the keyway, observing that the pick is straight and perpendicular to the face of the lock. The pick will bottom against the rotor of the lock. None of the pick elements should be pushed rearward by the action of the combining springs. Relax turning tension, and allow the pick tip to rise out of the cylinder about the thickness of a dime.

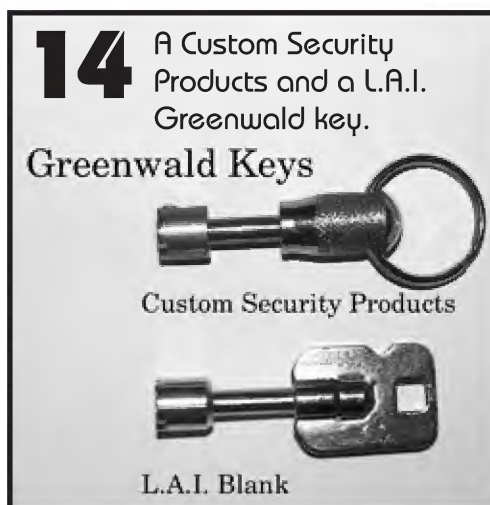
Apply light to moderate turning torque to the tool and push straight in, to again bottom the pick against the rotor. You will find with most tubular cylinders that not all of the pins will bind at the same time. As the rotor is turned to bind the top pins, minute differences between the axial positions of the holes in the rotor and the holes in the barrel will make one pin bind before the next. These cylinders are no different than the standard paracentric cylinders we pick every day. The binding pin will "mark," causing the pick element to be forced rearward.

Relax turning tension and allow the pick tip to rise out of the cylinder "about the thickness of a dime." Apply light to moderate turning torque to the tool and push straight in. Repeat this impressioning procedure until the cylinder turns.

Rotate the cylinder away from the key pull position, but not far enough to encounter the drivers or top pins a second time. This is about 12-1/2 degrees. If you turn the cylinder farther, you may relock the rotor in an "out of position" angle. Resist the urge to immediately turn the rotor to open.

Accurize the pick to the combining pins by holding the pick squarely in the keyway and pushing in on each of the pick elements. Leave the cylinder in the picked condition and carefully remove it from the cylinder. The pick now contains the combination for the key.

The A-1 tubular pick has a unique plastic decoder. The decoder has seven plastic posts, labeled to indicate the cut depth each represents. Hold the tip of the pick flat against the decoder as you see in *photograph 8*. Slide the pick element over the posts until you find the one that just touches





the end of the pick element. *Photograph 8*, shows the measuring of a #7 cut depth. *Photograph 9*, illustrates reading a #2 cut depth. Observe that the pick element touches the top of the post, but slides easily over it. Use the post gauge to find the depths indicated by each pick element, observing the proper cut location, and make the key.

### - HPC TLP-Guard Pick -

The HPC TLP Guard Pick is a specialty pick used to defeat the common Greenwald guarded cylinders found on laundry coin boxes. This pick is designed to manipulate the standard 137, 7-pin centered configuration cylinders. *Photograph 10*, shows the pick. The aluminum body of the pick incorporates a unique "reset lever" design. When the reset lever is lifted away from the handle, the pick elements will be reset automatically to the "0" cut position. There is no option for individually depressing the pick elements on this pick. The pick tension collar compresses a pair of neoprene "O" rings to tension the pick elements. The adjustable pick tension should be tightened finger tight.

The Guard pick is designed to manipulate the tubular cylinder of coin boxes like the one shown in *photograph 11*. This cylinder draws much of its security from the fact that it is in an inaccessible place. Note the keyhole design of the hole in the face of the cylinder guard. The large portion of the key is passed through the bottom of the keyhole, then must be lifted up to align with the tubular cylinder keyway. The lock cylinder is directly behind the smaller top portion of the cylinder guard keyway. The design of the cylinder guard demands a special pick design to bypass the guard and manipulate the cylinder.

The key turns 90° right to retract the four plate style door bolts. The carriage bolts at the four corners of the drawer front, hold the assembly together. The carriage bolts are case hardened, and very difficult to drill. The faceplate of the cylinder guard is also hardened against drilling.

*Photograph 12*, shows a detail of the pick tip. This pick uses a small roll pin as the locating key. Rotational torque is transmitted to the rotor of the cylinder by the locating key. The pick elements use a special design to allow the neck of the pick tip to be reduced

to .210", behind the .375 diameter pick tip. The pick elements operate in grooves, along the neck of the pick body.

### - Using the HPC TLP-Guard Pick -

This pick uses the very same impression principle that we have seen in all of the previous pick designs. The tension collar and neoprene rings pre-load the pick elements to overcome the action of the cylinder springs. Lift the reset lever to clear any previous pick setting and bring the pick elements all to the "0" depth position. Inserted the pick through the cylinder guard and raise the pick tip to enter the guarded tubular keyway. Without applying turning tension to the pick handle, push the pick fully into the cylinder keyway.

Relax the pushing force to allow the pick to raise out of the keyway, approximately the thickness of a dime. Apply light to moderate turning pressure and push the pick tip squarely into the cylinder. Relax the turning pressure and allow the pick to rise out of the cylinder again, about the thickness of a dime.

Apply turning torque and again push the pick into the cylinder. Continue this impressing procedure until the cylinder turns. If the pick element tension is correct, the cylinder should pick very easily. If you fail to pick the cylinder on the first attempt, increase the pick tension and reset the pick elements to try again.

These cylinders pick very easily when the tension on the pick elements is correct. Turning torque is never very hard. Pick easy and don't get a death grip on the pick handle. Let the pick do the work. Finesse is the order of the day with tubular cylinders. The neck of this pick will not take heavy-handed force. When the cylinder picks, allow the rotor to move away from the key pull position, but don't open the box. Relax the turning torque and "carefully" remove the pick from the cylinder protector. Use care not to bump the inside of the cylinder guard as you remove the pick. If you do, you may disturb the position of the pick elements.

*Photograph 13*, shows the proper method of decoding the Guard pick. Hold the step gauge squarely against the tip of the pick, and find the step

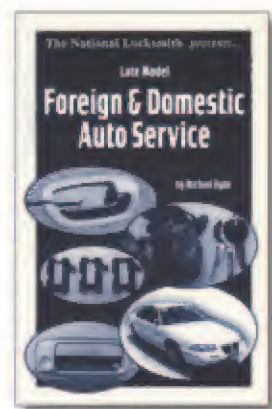
that "just touches" the top of the step. In the photo, we are measuring a #2 depth cut. Using the cut dimensions found above, transfer the cuts to an appropriate blank for the Greenwald cylinder.

*Photograph 14*, shows two options for the key. The top key is from Custom Security Products. This is a two-part key. The biting portion and small post neck thread into the handle portion of the key. Red (permanent) Lock-Tite™ insures that the key will not come apart in use. This key was designed to allow origination on most standard tubular key machines. The L.A.I. Greenwald key at the bottom is too long to fit into most tubular machines. It was cut using the HPC Pocket Cut-Up tubular key machine. The A-1 Security Products, Herty Gerty will also cut these keys.

Next month we will continue looking at a few other manufacturers tubular picks and discuss design differences and benefits.

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#FDAS - 1



# BEGINNER'S CORNER

## Key Impressioning.



by  
**Jim  
Langston**

Impressioning a key at times can seem like an impossible task, not only for the inexperienced locksmith, but the experienced locksmith as well. It takes a lot of practice and a lot of patience, mostly patience. If you are willing to put in the time, you should be able to master the process before you know it.

The most difficult aspect of learning how to impression is patience. Don't get in a hurry. It is possible to work on a lock and get it in five minutes or you may work on it forty-five minutes and still not make a key. If this happens don't quit. Sit back, take a deep breath and start over. If you get frustrated and quit every time you fail, you will never master the art. Impressioning is a lot like picking a lock; it takes practice and technique. How many times have you tried to pick a lock unsuccessfully, walked away for a minute only to return and open it with a couple of rakes? Impressioning requires patience, skill,



**1. A round file and a Pippin file.**



**2. Fixtures used to hold and leverage the key blank.**



**3. Bind the key and bump.**



technique and determination.

### Why Impressioning Works?

The reason impressioning works is because when the lock housings and plugs are manufactured, the pin holes or wafer slots are not always perfectly aligned. As a result, one pin will usually bind and mark before another. The closer the tolerances are in a lock, the more difficult it is to impression.

### Tools Needed

To begin there are a few tools that you will need. First is a good file. Some locksmiths use a round file others use a Phippen file (a tear drop shape) to impression with. I use a Phippen file because it is what I learned how to use. I recommend a #4 file, it is a smooth fine cut. (See photograph 1.)

Another tool you will need is something to hold the key blank.

Most use vice-grips, but there are specially designed key blank impressioning tools available from PRO-LOK and Framon Manufacturing for this purpose. (See photograph 2.)



4. Marks will appear in various locations.

For those who find that their eyesight is not what it used to be, (like mine) a good pair of magnifiers or optic visors to enhance the impression marks may be in order. Visors are available in various magnification strengths.

### Blank Preparation

Preparation of the key blank is a very important aspect of impressioning. Some locksmiths file the key blank to a knife-edge and some leave it flat. Both methods have their own merit. With a knife blade edge, the pins sometimes mark better than on a flat blade. Knife blading often works well for wafer locks.

The other key blank preparation method is to just file the blade flat to a high polish. Some will even use a code machine to lightly mark the pin spacing for the given lock on the key blade. This can be of great help, because besides not seeing the marks, incorrect pin spacing is the next greatest cause of failure.

### The Procedure

After the key blank is prepared and clamped in vice-grips or other key holding device (see photograph 2) insert it into the lock. Turn the key to the right to bind the pins, then wiggle or bump it up and down. (See photograph 3.) Turn the key to the left and repeat the process, then release and remove the key.

At this point you should have small marks pressed into the key blade. (See photograph 4.) These marks can be a round impression, a gash or a line. They will appear on the top of the key blade, but can also appear on the side of the key blade. If you are impressioning a 5-pin cylinder, you may only see one mark, or there could be up to five. Each lock will impression and read differently. If you can't see anything (which is the leading cause of defeat) a magnifier may be required as an aid.

File the marks you see and repeat the process over and over. (See photograph 5.) Note: Too much pressure on the blank when binding the key will break it, so use minimal turning and bumping pressure.



5. File only where you see a mark.

Do not file unless you can see a mark and always file flat across the blank. The heavier the marks appear the lighter you should file. That's because that pin is probably close to the shear line. Often a pin will mark for a time and then quit, then later will start marking again. The rule of thumb is, only file when and where the pin or wafer marks.

To learn impressioning, it is a good idea to key up a lock with only one pin in it at a time. Once you are able to file a key that operates the lock add a second pin and so on. Once you know what to look for the rest just takes practice. It is also not a bad idea to begin on a simple cam lock as opposed to a pin tumbler lock. As a rule, wafer locks are easier to originate a key for. Once wafer locks are mastered, then move on to pin tumbler locks.

One trick that can be used to aid in the impression process is to first pick the lock open and with a flashlight makes a careful survey of the pins. This can offer a general idea of the key biting to help in the process. Some people become so good at judging pin depths that they can look at the pins and cut the key by sight.

Another trick is to use a fluorescent marker on the blade of the key and then place it under a black light to enhance the marks. Some believe that using a yellow light enhances the marks. Whatever it takes to get the job done is applicable. The leading cause of impressioning defeat is failure to see or identify the marks, so do whatever it takes to help.

This is a general overview of impressioning. There are many books available on the subject that I would recommend for greater depth of the impressioning process. By all means, master the impressioning process, at least to a certain extent. You will find that it will help on many difficult jobs with considerable time savings. Just remember that it takes time and patience, so don't get discouraged.

### Point to Ponder:

A closed mouth gathers no feet. **TNL**

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#HSS, HSS - 1



# The VS. .003 .005



by  
Sal Dulcamaro



## Pin Debate

**LAB** is by far the number one manufacturer of pin tumblers for locks, manufacturing many OEM pins as well as aftermarket pins. For years LAB has been advocating the design benefits of the .003 increment pin system - which is the foundation for LAB - as opposed to .005 increment pin system. LAB manufactures both, but the .003

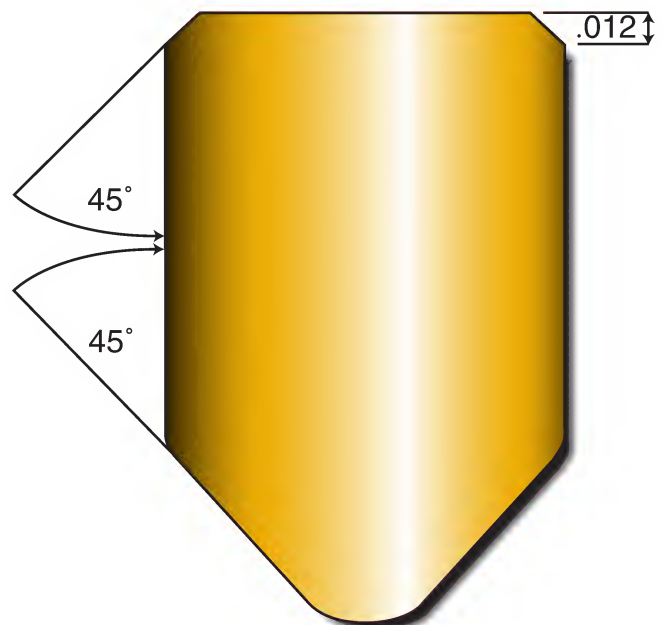
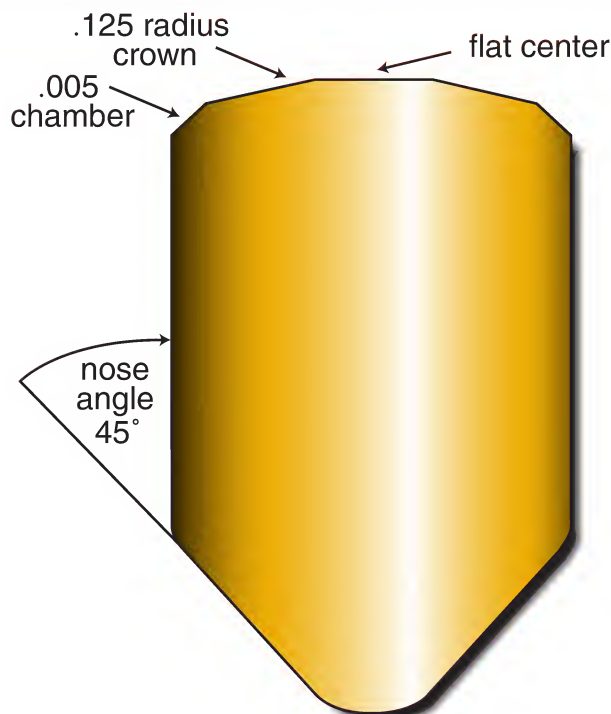
increment pin system is near and dear to their heart. Robert Labbe designed and copyrighted the .003 increment pin system, touting its many attributes when compared to the then standard .005 increment system. But, what really is the difference between the .003 increment and .005 increment pin system and is one really any better than the other?

For that answer I interviewed Jerry Roraback, executive V.P. of LAB, who

has made it his mission to inform and educate distributors, dealers and locksmiths about the .003 vs. .005 pin design. I managed to arrange an interview with Jerry while he was on vacation in Florida. He was gracious enough to spend more than an hour on the phone with me, when he could have been doing other things that had nothing to do with work. The interview covers LAB's products, goals, philosophy and informative

.003 Universal Tumbler Pin

.005 Universal Tumbler Pin





educational seminars. What follows are excerpts of that conversation:

**Dulcamaro:** *I know that many years ago it was a standard (and accepted) practice for locksmiths to file pins down to size to match a key biting. Obviously, it was not very precise and usually altered the plug in the process. The introduction of a "universal" pin kit was a major step forward in upgrading the professionalism of locksmiths. Where did the universal pin kit come from?*

**Roraback:** I've been around 20 years, so I'm still a baby here. There are a lot of guys who have been in this a lot longer than I have. You hear a lot of stories, but to the best of my knowledge, somewhere in the fifties, maybe 1955 or 1956, Bill Zipf, Sr. or somebody in that family put together a pin kit in .005 increments. I think that was the birth of the universal system, somewhere in the fifties, from the Zipf distributors in Columbus, Ohio. It's kind of ironic because they're one of our top distributors today. They are one of the best lock wholesalers in the country. They're super people to work with.

**Dulcamaro:** *When I first started out back in 1975, the first pin kit I had was a Zipf kit. For a long time that .005 increment pin kit was the standard, how did LAB enter the picture?*

**Roraback:** I think it was right around 1978 when LAB got started. As Bob tells the story, he was on the beach thinking about all the manufacturers different pin sizes, shapes and designs. He then came to the startling realization that the .005 pinning system could be off as much as .003 above the shear line or .002 below the shear line. Why is this thing so popular? Why is it being used?" Well, because it was the only thing out there. Plus Zipf had color-coding.

**Dulcamaro:** *A pin kit without color coating is a potential nightmare. You drop a pin in the wrong compartment and you'd never find it.*

**Roraback:** That's true. But also, if you're behind the counter... say at Hardware Sales in Detroit, and a locksmith asks for .240 bottom pins in the .003 increments which are green, and you grab a pack of red pins, he doesn't even have to look at the size; he knows they're green. So if you hand him a pack of pins and he flips them over, like in our "Smart Pac" and

he sees red, it's the wrong pin. It's not the right size. The color-coding is not only significant when it comes to mixing pins, but in terms of their usage.

**Dulcamaro:** *For Schlage, the .003 increment pins are all the same color (green). If I see it's not green, I know it's not supposed to be Schlage. Was it designed that way intentionally?*

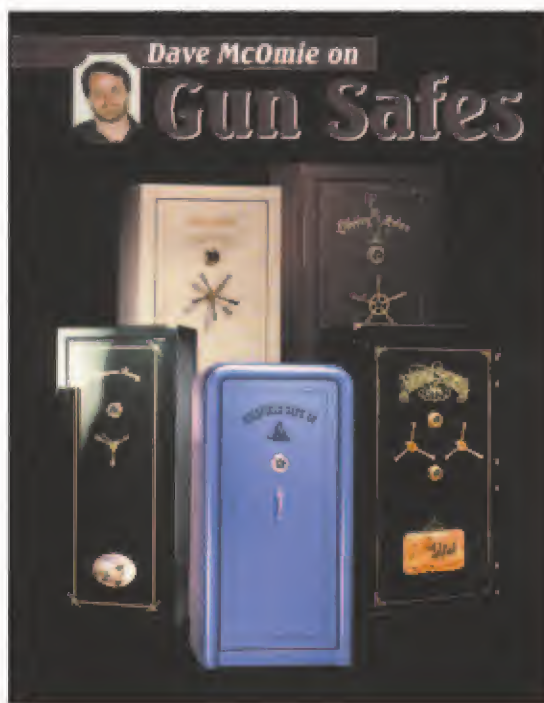
**Roraback:** I'm not sure if Bob Labbe designed it that way, but he sat down on the beach and figured if he used the .003 system and could get within a thousandth, there would be

no need to file pins or worry about sticky cylinders. That's how he came up with the .003 system.

**Dulcamaro:** *Did he start LAB with only the .003 system kits?*

**Roraback:** He had to have the .005 pin system as well. To be competitive in the pin business he had to deal with more competitors than just Zipf pins. In the late seventies, there was also ESP, ILCO and some others, but everybody had just the .005 system. To make it in the pin business, he would introduce his .003 system, but would also make the .005.

# Gun Safes



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#GS - 1





The other thing he did was develop a one level system; you didn't have to open a drawer to get to the other pins. The first one was called the U-99 because his universal kit had 99 sizes of pins. Then he came up with the Z-79, and it's funny because the "Z" initially stood for Zipf. And the "79" stood for 79 sizes.

**Dulcamaro:** *What influence did Gerry Finch have on LAB?*

**Roraback:** Gerry changed the .003 system just a little bit. Back in the eighties Gerry Finch came from Falcon. Gerry worked with us for a couple of years. God bless his soul.

**Dulcamaro:** *What is the difference between the .003 and .005 pin systems?*

**Roraback:** The .005 increment pin system had the flat and the chamfer, and the .003 increment pin system had a very small chamfer and a full crown, very similar to the Schlage pin. The .003 increment pin had the advantage of being no more than .001 off, but it also worked smoother in the cylinder because the crowned top surface of the bottom pins matched the shape of the top surface of the plug. Gerry Finch sat with Bob Labbe one day and they both decided that LAB should put a very slight flat on the crown. That way when a professional locksmith does master pinning, the master pin won't rock.

**Dulcamaro:** *What other things did Gerry Finch do?*

**Roraback:** He took all the pin charts that were out there, including LAB .005 increment and .003 increment charts, and then studied all the original equipment manufacturers (OEM), and realized that most of the commonly used charts were wrong. He spent two years gathering

information from the factories. Gerry went through and got all the OEM manufacturers pin increments straightened out. When you see the LAB chart on the .003 or .005, it's the most accurate chart data you could possibly use. Because .003 and .005 systems use different increments, certain pin sizes will have slight variations from original factory sizes. A .005 increment pin can be as much as .002 off the OEM size, while the .003 increment pins can boast of being within .001, if not exact.

**Dulcamaro:** *There are some brands, like Schlage, that have increments that are evenly divisible by both .003 and .005 where both types of kits use OEM lengths.*

**Roraback:** The advantage that the LAB .003 has over LAB .005, even though the sizes are identical, is the radius and the flat of the top of the bottom pins makes the cylinder work smoother. Gerry Finch and Bob Labbe proved this. They took two Schlage cylinders and coded one with .005 pins and the other with .003 pins of the exact same key cuts. Even though the pins were the same length, the .003 pins worked a lot better; it felt smoother.

**Dulcamaro:** *I really hadn't thought of that before, but the overall geometry of the plug and the design of the flat pin will force the bottom surface of the top pin to cut into the pin chamber around the edges, correct?*

**Roraback:** That's it!

**Dulcamaro:** *What's the greatest concern in such a case?*

**Roraback:** It's not so much a concern with the bottom of the top pin, unless it is dropped too low. It's actually the top surface of the bottom pin. The radius of the crowned pin will match the radius of the plug at the top of the pin chamber, so the shapes will be nearly identical. If the correct length .003 pin is used, the bottom of the top pin shouldn't catch anywhere at the top of the plug chamber. The flat top surface of a .005 increment pin doesn't match the radius shape of the plug. It would tend to catch on the upper chamber. If shorter, it would allow the bottom surface of the top pin to fall a bit low and cause the outside edges of the top pin to slightly catch at the top of the plug chamber and gradually wear a pattern into it.

**Dulcamaro:** *So why would locksmiths still use the .005 increment pin kits?*

**Roraback:** Why, is right. No matter where I go I still see some locksmiths sitting there with either their old Zipf kit or some old LAB .005 kit. But I'll guarantee you one thing, there may be a .005 increment pin kit sitting on the counter in the shop, but I bet you there's a .003 pin kit sitting in the truck. It's really neat now to see the transition. When I first came into the business in 1980, Zipf and the .005 system was everywhere. Now, twenty years later we're starting to see the fruits of our labor. We're starting to see the transition. In reality it's not even the fruits of our labor, it's the intelligence of the locksmith.

**Dulcamaro:** *I was trying to figure why anyone would still use .005 increment pins as well, so I posted a question in a locksmith forum asking why some locksmiths stick with the old .005 universal pin standard. I got some fairly interesting responses.*







**Roraback:** Really? Like What?

**Dulcamaro:** *What their using now seems to work okay. In other words, if it ain't broke, don't fix it. That same kind of excuse kept me using WD-40™ as my primary lock lubricant until just a few years ago. When I came across a sticky lock and sprayed WD-40™ inside it, the lock usually worked a lot better afterward. I didn't think I needed to try anything else, until just a couple of years ago that I happened to try a Teflon based spray lubricant, and I was amazed how much better it worked than WD-40™. Does that make sense?*

**Roraback:** But when you found something better, you switched.

**Dulcamaro:** *Yes, but with nothing to compare to WD-40™ prior to that, I had no real point of reference to judge the adequacy of what I was using, so why change?*

**Roraback:** I hear a bit different story from a lot of locksmiths. First point is, a lot of the fellas who have been in the business a long time make the comment that their inventory is all set up for .005 pins. And they have three, four, maybe five or six .005 increment pin kits. They say it's going to be difficult and an expense to change those kits and their inventory over to .003 pins. That's economics, and that I understand. The only thing I ask is that the next time they go over to buy a pin kit that they try a .003 pin kit. If they don't like it, I'll trade them a .005 increment pin kit for it. I know that if I meet such a person who bought a .003 kit and ask if they want to trade it in for a .005 kit they will say no.

**Dulcamaro:** *What is the best lubricant to use in a pin tumbler lock?*

**Roraback:** One of the many great things that Gerry Finch did for us

happened at the Weiser factory. He took us into the pinning area where the automatic machines were loading the pins and the cylinders were coming off. The girls there had a small cup about the size of a shoeshine can. The cup was filled with a white powder. They would take this little brush, and brush it across the cylinders as the cylinders went by them. I said, "What is that?" Gerry said, "That is the best kept secret." He said, "That's TL107, it's a DuPont product. It's a dry Teflon."

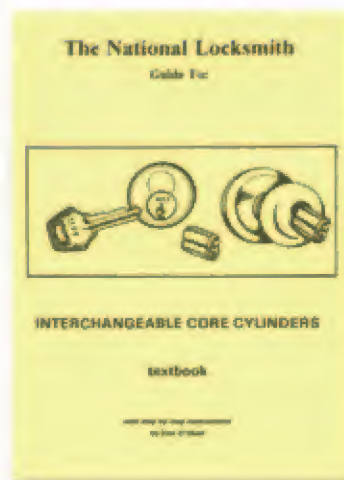
**Dulcamaro:** *So is Teflon the best lubricant to use?*

**Roraback:** One of the first things that Gerry did when he came to LAB, was to set up his tool line. His tool line included all the picks he designed, a cylinder cap remover and a special type stainless steel tweezers. One of the things he also added was this TL107 in a toothpaste type tube and that is one of our best selling products that Gerry introduced. Teflon is the way to go. Even though it might cost two to three times as much, it lasts a lot longer so you don't need to use as much.

**Dulcamaro:** *But if you don't try it, you don't know that and you might think there's no big difference. When you feel it, though, there's no doubt. The same for the .003 pins; you have to get them to try it in order to persuade them. How do you do that?*

**Roraback:** To create or change any type of habit is difficult. That's why we're doing these technical seminars. We are still selling a ton of .005 pin kits, but nowhere near the number of .003 pin kits that go out our doors. If the guys are buying the .005 pin kits, either we're not doing our job or they're just stubborn.

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#ICB - 1



**Dulcamaro:** *One of the features you mentioned about LAB kits was the single tray. There was one locksmith who mentioned the size of the pin kits as a reason for still using the .005 two level wood kit. The old woody kits took up less space on the counter. That becomes a consideration, especially in a cramped service van. Do you find this to be true?*

**Roraback:** Our most popular kit is our Wedge .003 kit, and that and our other full size kits are roughly 21 inches long. 21 inches on a workbench in a locksmith's shop is okay, but 21 inches in a van is not good. It's funny you should ask about a smaller size kit, because it just so happens that we're working on a new product. It's a two level metal kit that is only 15 inches long. Master pins will be on the lower tray. Instead of having the drawer come at you, which would take up extra work space, the drawer will move left or right. If you are left handed, you can slide the tray to the left. If right handed, you could slide the tray to the right. This product wasn't dreamed up by some LAB employee, but inspired by locksmiths who we talked and listened to at the technical product seminars. We are

always listening and trying to improve our product line.

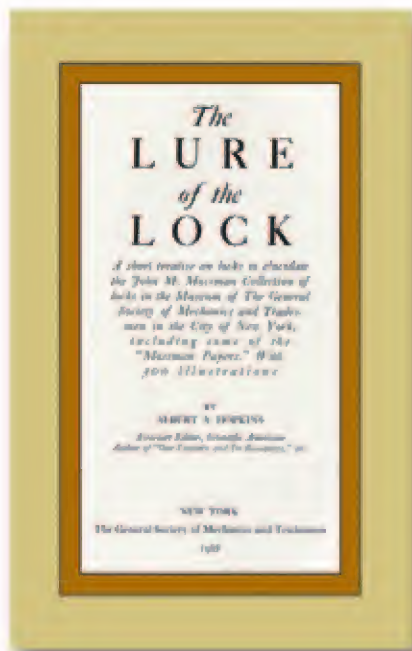
– Conclusion –

There were a number of references earlier in this interview, about the LAB technical product seminars. These seminars are quite unique. LAB has high level people, like Jerry Roraback, come to local associations or distributor sponsored events and talk directly to the locksmiths about LAB products and the way the company operates. I have been fortunate enough to have seen Jerry in action twice (a few years apart) at my local association: Locksmith Security Association (LSA) in southeast Michigan. He talked about LAB and its tight quality control standards, and the machinery that is capable of accomplishing it.

Over the years, I've dealt with a lot of companies that sell to the locksmith market. Many have very high quality products, as does LAB, but I've never seen another company show as high a level of commitment to the locksmiths. The locksmiths are number one priority for LAB. I know a lot of locksmiths would appreciate that, since a number of manufacturers put locksmiths' concerns very low on

the totem pole. Where other companies might send a local sales rep., LAB sends people like their Executive Vice President. How many high profile companies do you know that will do that?

The two times Jerry visited our association were among the most attended meetings we'd ever had. LAB's generosity and sponsorship of locksmith organizations and associations is unmatched. It was hard to keep track of all the products that were donated and given as door prizes for association members. Jerry told me that they do between seven and ten seminars around the country per year. To date, Mike Sigmund, Director of Sales and Marketing has taken over the responsibilities of directing the Technical Product Seminars. If your local association wants to invite LAB for a seminar, I'd suggest you contact Mike Sigmund at 800/243-8242. They may already have something scheduled in your area, or you may have to wait a bit to account for previously scheduled events. You can also find them on the Internet at: [www.labpins.com](http://www.labpins.com). You will not find a company that shows a greater loyalty to locksmiths. **INL**



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#LURE



# The UGHTER Side

"Ladies' Man"



by  
**Sara  
Probasco**

"I don't know how you can stand the kind of work Don does," a neighbor said over coffee, one morning. "It would drive me crazy if my husband got calls from women at all hours of the day and night to go who knows where to open their cars and houses. Don't you ever worry about what he might be doing? I mean, really doing?" She paused to sip her coffee, peering at me over the rim of her cup in hopes of seeing a reaction. Getting none, she set the cup down and leaned forward to whisper, "Doesn't it ever occur to you he could be carrying on with somebody right under your nose, and you'd never even know it?"

I smiled, thinking of a little poster that hung on the bulletin board in my office.

"Please be patient. I only work here because:

I'm too old for a paper route,  
too young for Social Security,  
and too tired to have an affair."

I figured Don was a lot like that, too.

Patiently, I said, "Oh, Rose, I decided a long time ago that if Don and I can't trust each other, we don't have much of a relationship." I giggled before adding, "Besides, most of the ladies who call him are in their seventies."

Rose rolled her eyes and smirked. "Sure they are. You mean like that rich widow down the street from me, for example? What's her name - the one who struts around her front yard in a string bikini, pretending to water her flower beds?"

"You mean Hazel Triplett?"

"That's the one. I saw his truck over at her place all day long, a couple of weeks ago, and the young widow Triplett didn't stick her nose outside

the house all day. I started to call you, but I figured maybe I'd better just tend to my own business."

"Good decision," I said pleasantly. "So why did you change your mind now?"

"Why, honey, somebody has to tell you these things. You know what they say: the wife is always the last to know."

I opened my mouth to inform Rose that the widow Triplett had been out of town that week, that Don had taken the opportunity to re-pin locks throughout her house and install deadbolts while there was no one there to bother him, and that during a time when Rose had apparently left her surveillance post that day, I had even shared a picnic lunch with Don at the job site. However, I decided not to confuse her with the facts. It was more fun to let Rose think whatever she wanted to think. She was going to, anyhow.

A couple of weeks later a slightly unusual call came in. Late one afternoon, I heard Harold answer the call and pass the information to Don.

"She's at Rita's beauty salon," Harold said, "and she's locked her

keys in her Explorer."

"Where is the vehicle parked?" Don asked, reaching for his keys.

"Well, that's the funny part," Harold said. "The Explorer is at her house, out in the country a couple miles, with the keys locked inside it. She needs you to pick her up at Rita's and drive her home, only she's getting a perm and she's not done yet, so she'll call you when she's ready. I told her you'd let her know if there was a problem with this."

Five o'clock rolled around before the woman called back. Don was almost finished with a large re-pinning job when Harold offered him the telephone.

"She says she's ready for you now."

"Oh, is that my date calling?" Don asked. "Well, just tell her I'll be there to pick her up in about fifteen or twenty minutes."

Harold complied and hung up the receiver. "She sure sounded impatient," he said.

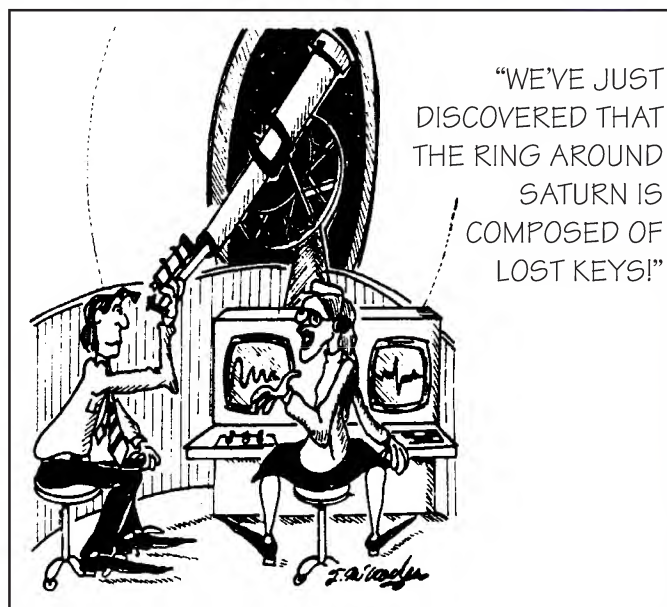
"Aw, you need to make women wait a bit. They appreciate you all the more." Don cut his eyes at me and winked.

The following morning, I heard Harold enquire of Don, "Well, did you pick up your date yesterday evening?"

"Yep," Don replied. "We had us a fine time."

I chuckled to myself. His "fine time" was certainly abbreviated. He had picked her up, driven her out to her house, opened her Explorer, gotten paid for the job, and was home for supper in a little over thirty minutes. Fast work. Hmm, I thought, maybe I should get him a Mighty Mouse T-shirt.

I've heard tales from various locksmiths about being greeted by half-dressed seductive women when





they've answered late-night emergency calls at apartments. I imagine a lot of such reports are more wishful fantasies than fact, but wouldn't Rose love to hear them!

However, so far as I know, the most exciting encounter Don's had was a bevy of high school girls floating the river in their bikinis who locked their keys in the trunk of their car and called him for help. He had a lot of trouble opening that lock with those six scantily clad girls hovering about - especially after they offered to take him along home with them to a party, once he got it open.

Then there was the woman who called to see if he could open her vehicle, and when he said yes, replied, "Oh, I love you, I love you, I love you!"

From time to time various women have brought him home-made cookies and peanut brittle, written him warm thank-you notes, and even written letters to the editor of the local newspaper praising Don's expertise on their behalf. But the most hilarious event was centered around the antics of a dear out-of-town friend of ours whose locks Don re-pinned as a favor.

Margaret's recent ex-husband was trying to get into the house to take things that didn't legally belong to him, and she wasn't in a financial position to pay someone to change the locks.

A couple months after this took place, she was in town visiting me for the day. When she was ready to depart, she said,

"Give Don a big hug and kiss for me."

I said, "Stop by the store on your way out of town and give him one, yourself."

"You wouldn't mind?"

"Of course not. And he'd be furious if you didn't stop in to say hello, at least!"

When she reached our store, Don had gone to the little café next door for lunch. Margaret waltzed in there and made a b-line for the back table where Don was sitting. Seeing her coming, he stood and threw his arms wide to give her a hug.

Without a word, Margaret grabbed him around the neck and planted a big, red, fresh-lipstick kiss right on his mouth. Then, grinning and waving goodbye, she wordlessly walked out amid the buzz of shocked

conversation and the craning of necks.

Laughing, Don called after her, "Margaret! Come back! You can't leave me like this."

Margaret was still laughing when she called me from home, a couple hours later to tell me what she'd done. By then, Don had already filled me in on his little tête-à-tête at the "Git 'n' Gobble."

The following day, Don again went to the café for lunch. When the waitress seated him, she said with a grin, "Well, what sort of excitement

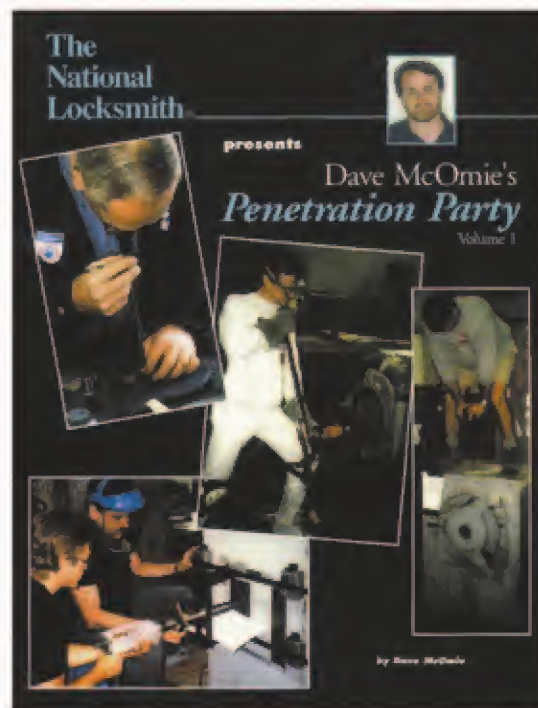
are we in for today?"

Now, I'm not sure if Margaret, a total stranger to our town, convinced the packed house that day that something was going on between her and Don; or if her actions were so absurd that nobody paid much serious attention, but to this day not one single person who witnesses that embrace has mentioned it to me!

Seems to explain why the wife may be the last to know.

(That is, unless she's in on the shenanigans in the first place.) **TNL**

## Penetration Party



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#PP - 1



# MOSLER In and Outs



by  
**Dale W. Libby, CMS**

writing about safes and vaults for more than 30 years, mostly for *The National Locksmith* magazine. I write about the safes that have caused me troubles or that I think are interesting. I am changing my focus on pictures. My editor has informed me that pictures of the dial and handle, and installing the Strong Arm drill rig are getting monotonous. So, a new series of pictures is in order, pictures that may actually show different important facts and stress little known concepts. I will still emphasize the basics and let you in on some of my thinking as the "Why" of the attack as well as some significant observations.

One such opportunity first began as a single safe opening. The container in question was an old Mosler fire safe about 4 feet tall, 30 inches wide and 28 inches deep. These measurements are approximate and only go to show that the unit was a medium sized fire safe. The plastic insert in the center of the dial and the shape of the entire dial and rectangular opening handle shouted Mosler. My theory on safe and vault opening is to attack the lock. It is not too important who made the safe unless one has trouble with relocking devices that have been activated.

There is a crossover time when Mosler went from the older CD120 locks to the newer 302/402 locks. Both dials were somewhat similar. I usually tell the difference by the feel of the lock, the wheel pressure when turning, and if the dial clicks or pulls out at the zero mark. If the dial clicks when turning, the lock is an MR (manipulation Resistant) 302. If the dial pulls out at zero, then the lock is a MR CD120. Other than these two indicators, the lock in question can be either.

I have drilled a 120 lock with the 302-scope hole and opened it with little or no damage to the 120 lock except for a marring of the lever post. I felt less drag on the wheels when turning the dial and figured correctly that the wheels were the plastic 302 lock variety. They were, but the lock wasn't.

**T**rying to come up with new and exciting things to write about is often very hard for me. I have been

Before doing any drilling I like to move the safe slightly. This lets me know if the safe is anchored to the floor and how heavy the unit is. I slightly wrenched my back on this particular unit, but it did move. What this told me was that the unit was too heavy to be just a fire safe. I rightly anticipated that there was an inner money chest welded to the inside of the outer safe.

I informed my customer that the price I had given him was for opening the outer safe only. I told him that the safe was either full of heavy stuff, or that there was an inner money deposit unit located inside the safe. This excited him and he agreed that the price only included the outside safe opening.

I pulled the dial by first breaking the plastic cap. Using my Timemaster dial puller, I then quickly removed the outer dial and ring. The puller works by a threaded inner bolt that pushes the dial off the end of the combination lock spindle without harm to the lock body. Slam pullers are great, but slamming the dial off may damage either the lock body or the end of the wheel pack post.

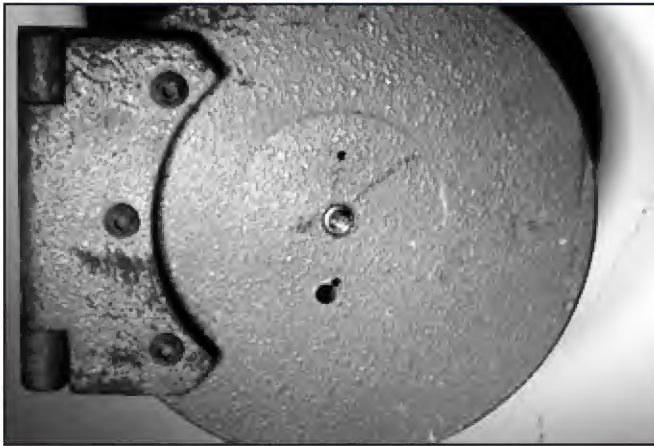
Installing the Strong Arm drill template, I entered the lock through hard plate just over the lever for a fantastic viewing of the wheels, lever and gates. After dialing open the lock, I replaced the inner plastic dial insert and reinstalled the dial on the punch proof spindle. After filling the 1/4-inch hole with a hard pin, the outer safe was good as new. Opening the door exposed an inner money chest as was expected. For some reason, this really excited the customer, and he wanted me to immediately open the inner chest.

I first spun the dial a few times. I knew the round doors like this had to use a Mosler CD120 lock, but it did not feel right. It turned too easily and the pick-up of wheels was too slight. I know these locks use metal wheels and the pick-up point while counting the wheels should have been much stronger. I told the customer I would research the inner door and come back the next day to open it. I really needed time to think.

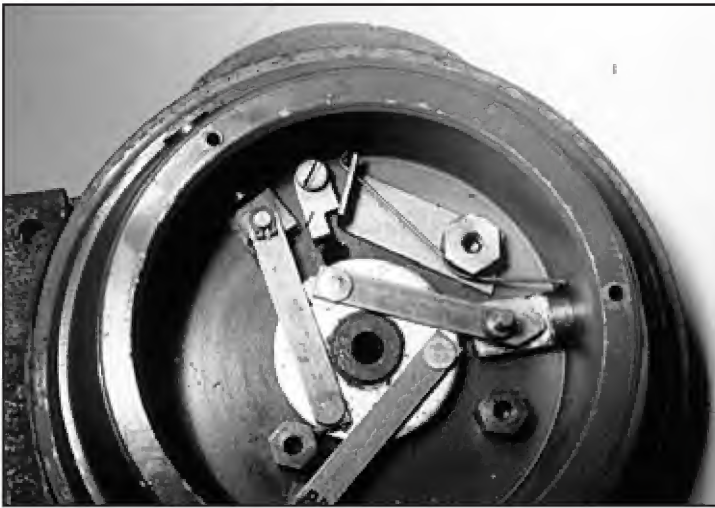
In my years of safecracking (about 40 years now), I have used many rules that are mostly true. When opening a safe with an upper and lower compartment, whether both square, both round, or one of each (supermarket



1. Drilled hole for Mosler CD120 locks



2. Drilled hole misses door relocking device



3. Relocking device activated by keeping opening bolt washer from moving.



safes), the general rule is that the upper door and the lower door use the same lock, maybe in different configurations or mounted in different directions, but usually the same lock. This rule may not apply to inside and outside safes, even if the inside safe was installed at the Mosler factory. This rule did not apply in this case. The inside door was a Mosler tri-bolt round door with a CD120 lock. It did not feel like a 120 lock however.

The first problem with the opening was removing the dial. The dial looked somewhat like an S&G dial, but the dial ring was definitely not S&G. There was no key change index on the dial ring, and the opening index was a straight line, unlike the standard S&G crow's foot. Removing the dial was not an easy task. It was diabolical. It was pressed so hard onto the spindle that I broke a setscrew trying to push it off the end of the spindle. I drilled away

much of the dial ring with a 5/16" drill before I could gently pull it away. I was not worried, however, for the drive cam used the standard S&G 5/16 x 40 threaded spindle common to most S&G dials and other non-Mosler locks.

*Photograph 1*, shows my 5/16-inch opening hole, as well as the hinge shape of the round door. The three attaching bolts are revealed. My new Strong Arm drill rig template has the correct holes to mount to a Mosler door along with the drill point for the 120 locks. The hole is located at number 1 on the dial out 1-3/16" from dial center. The precision of the Mini-Rig is such that the mounting hole for the upper screw is not harmed while drilling.

**T**his hole will let you drill into the lever stop of the CD120 lock and view the wheels and the gates and the lever of the lock and quickly dial open the safe. The hole also misses the round door relocking device that is just above the drilled hole (*See photograph 2*). In this photograph, the hole is seen directly under the non-activated relocker. The bolts are withdrawn in the unlocked position.

The pin on the bolt in the 3:00 o'clock position activates the bolts. The combination lock bolt fits over this pin, and when the bolt is withdrawn into the combination lock, the pin is pulled and turns the large bolt washer, which draws in the other two bolts as well. The case of the CD120 lock is specially milled out to allow the bolt to move far enough to let the bolts withdraw almost flush with the outside of the round door.

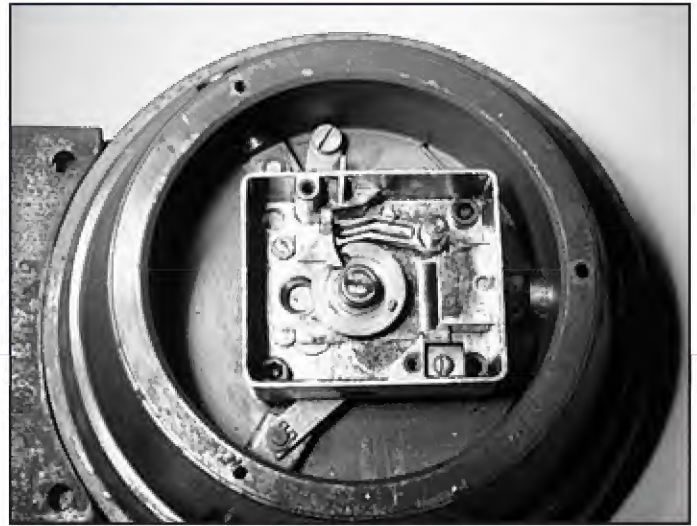
Also note that there are three hex head mounting bolts with 1/4-20 threaded holes in them. The lock is mounted with only three screws. The fourth screw would interfere with the movable bolt so it is not needed or used.

*Photograph 3*, again shows the three locking bolts, but now the locking bolts are extended and the relocker has been set off, and the relocker itself is locked into position. The relocker is held up and out by a metal arm that is attached to the cover of the lock. If the combination cover is punched off, both the external relocking device and the internal relocking trigger are set off. The external relocking plate is forced into the opening washer not allowing it to turn and withdraw the locking bolts. In addition, a spring loaded metal arm





4. Note pinhole in bolt for retraction of bolts. Ruler shows position for relock trigger inside lock.



5. Bolts are withdrawn. Pinhole is inside of lock. Stop lever is not damaged by 5/16-inch hole.

snaps into position and keeps the relocking lever from being raised up.

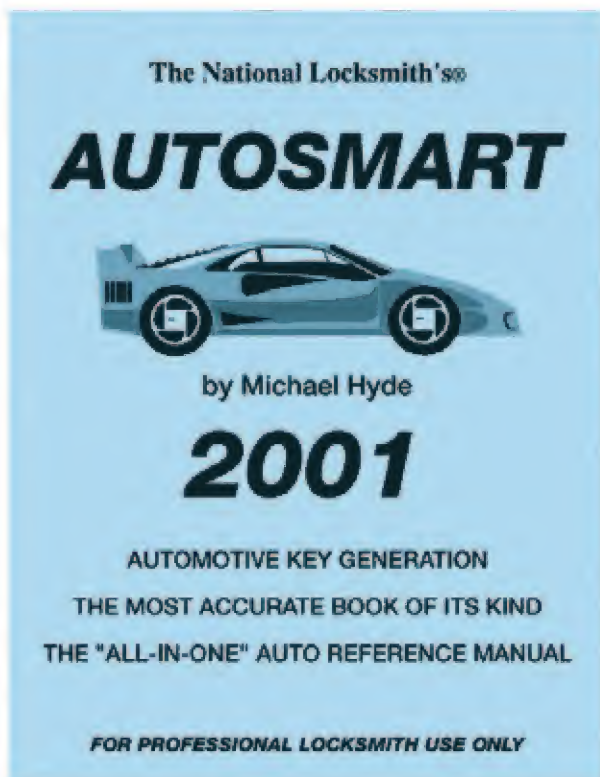
I have never worked on a relocking device like this, because it's next to impossible to beat a Mosler punch proof spindle into a safe head and trigger it. If accomplished, however, it would be a nasty opening and deactivation. If one relocker was set off, then both would be activated at the same time. Two additional holes would have

to be drilled to deactivate both the external and internal relockers.

Once through the hard plate into the lock itself, I was slightly astonished. The first surprise was that the wheels in this lock were the same plastic wheels on the outside 302 lock. What were plastic wheels doing in this safe lock? I had never seen plastic or X-ray proof wheels on a 120 cover, but there they were. My next problem was

that a plug of metal was resting on the lever fence, obscuring all but one of the wheels and its gate. As I was groveling to open this safe in the first place, the obscuring metal plug did not improve my humor.

With a little persuasion I eventually got the lock open and the three locking bolts withdrawn. Shown in *photograph 4*, is the 120 lock with the wheel pack removed. The lock is in



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the about to be opened position. The pin on the 3:00 o'clock bolt is shown on the lock combination bolt. The lever has dropped into the gate of the drive cam.

The end of my scale (ruler) points to the internal relocking spring plates. These plates are held in place by a slotted screw just below the ruler in the picture. When servicing these locks, make sure the plate (or plates) are straight and that the screw is tight. These plates are forced out of the cut out in the opening plate by a large pin on the cover of the lock that also contains the wheel pack. The opening lever is unique to Mosler 120 locks.

*Photograph 5*, shows the locking bolts retracted. The pin can now be seen just inside the lock body of the CD120 lock. Even though I used a 5/16-inch drill bit, the lock has not been damaged and can be put back into shape and can be reused.

*Photograph 6*, is a bad photo of the plastic wheel pack. The relocking pin can be seen next to the wheel pack, opposite the brass spacer washers. This is at approximately 5:00 o'clock in this picture. The repair of the safe door was accomplished with a threaded

bolt, hardened ball bearings and welding.

As mentioned before, the dial I used was a new S&G dial and ring. The time consuming part here was to make the spline key slot larger in the dial spindle to handle the Mosler spline key, which is much wider and deeper than that of an S&G spline key. I cut the double-sided spline key in half and used a Dremel tool to make the cutout in the S&G spindle deep and wide enough to handle the oversized piece of brass. It eventually fit tightly and perfectly. The only other problem was that the combination was two numbers off to the low side. If I wanted 48 as one of my combination numbers, I had to set the hand change wheel at 46. I made a note of this on the back cover of the lock with Magic Marker for future reference.



**6. Plastic wheels on CD120 cover. Note relock pin on back cover.**

**N**ext time, I will include a lot of boring pictures of dials and handles. Tell me what kind of pictures you want and I will do my best. Open, research, live long and prosper! **TNL**

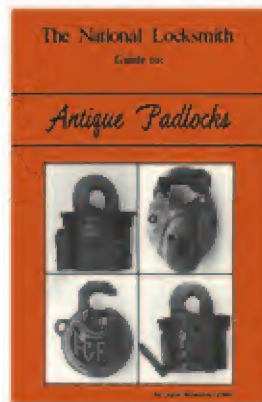
## Ford 8 Cut Decoding Key Set



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#FD - 8

## Antique Padlocks



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#PAD - 1

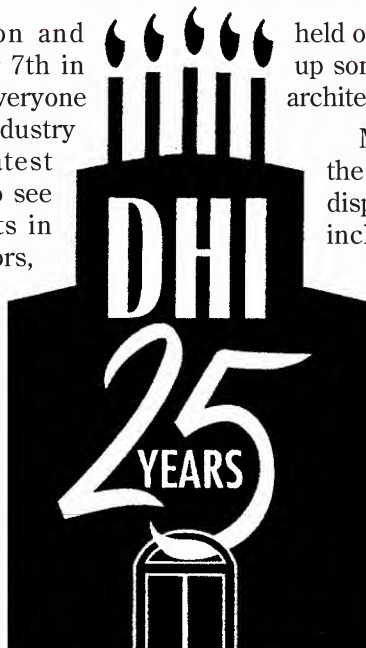


# DOOR AND HARDWARE INSTITUTE CONVENTION AND EXPOSITION

## DHI's 25th Anniversary Convention

DHI's 25th Anniversary Convention and Exposition will kick off this September 7th in beautiful San Francisco, California. For everyone involved in the architectural openings industry this will be the place to learn the latest business trends and developments, and to see the greatest collection of new products in North America. More than 4,000 distributors, manufacturers, architects, specifiers, building owners and managers, code officials, and locksmiths will be in attendance.

DHI will offer over two-dozen educational programs ranging from the newest technology to electronic security and access control to personnel management. DHI consultants will earn points toward their Continuing Education Program (CEP). A special series of education sessions for architects will be



held on the exposition floor. It's a great place to pick up some AIA/CES points while seeing the latest in architectural opening designs and applications.

More than 200 exhibitors will be presenting in the Moscone Convention Center. Manufacturers display their full range of products and services including doors and frames, hardware, access control and security products, as well as postal specialty products and washroom accessories. Come a day early, September 6th, and attend the industry's Forum for the Future - The Changing Channel: Exploring the Future. This full-day management program will address what the key issues are facing our channel of distribution today, and what specifically can you do about these issues. Please join us for our Silver Anniversary event and celebrate the history and the future of our industry.



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#GM - 2



# PRODUCT SHOWCASE

DHI - September 2000

Circle the numbers on the **RAPID REPLY CARD** and send it in.

## Architectural Builders Hardware Push/Pull



ABH 6700 Series Hospital Push/Pull trim can be used on most manufacturers mortise locks. Existing mortise locks with knobs can be changed quickly and easily to push/pull for ADA compliance with no additional door preparation. Trim can be mounted up, down, horizontally or any combination without any changes in the field.

## DHI PAGE 4 Adams Rite MS Lever

Adams Rite Manufacturing Co. has brought back the lever operator for its MS Lever series of deadbolts. The 4550 MS Lever is being re-introduced with a unique clutch mechanism that helps protect the lever from abuse and vandalism. The lever allows narrow stile doors with deadbolts to meet the strict ADA guidelines for accessibility.

The 4550 allows the deadbolt to be easily lock or unlocked with an

upward or downward movement of the lever. A built in indicator allows a quick visual check of the locked or unlocked status of the door. The 4550 is also easy to install, requiring only four drilled holes plus the preparation for the indicator. A



patented cam allows for installation on narrow stile doors with an Adams Rite MS deadbolt. The lever can be installed in place of existing key cylinders or thumbturn cylinders on the inside of doors.

## Advanced Signaling Door Status Switches

Advanced Signaling introduces Bond Sensing and Door Status switches available on all L100, L1000E and LW1000 series electro-



magnetic door locks. All Advanced Signaling magnetic locks are US made and come with a 5-year warranty. All locks are available in three standard finishes - stainless steel, bronze or white. Quality can be affordable.

## Detex Announces Advantex



Detex has introduced of Advantex surface vertical rod panic hardware. The 20 series is wide stile, surface vertical rod panic hardware with a bottom drop bolt featuring 3/4" throw and ADA-compliant rod covers. The 21 series is TRO - Top Rod Only. The 50 model is narrow stile and it includes the same features as the 20 series. The 51 model is TRO. All series are available in 3-hour fire ratings for up to 10-foot doors.

## DORMA Surface Closers

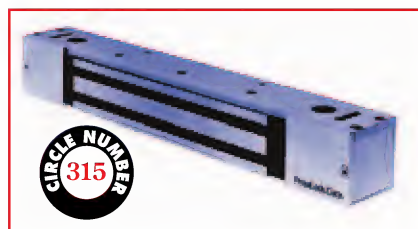
DORMA Architectural Hardware offers two narrow-projection surface closers, the 7900 and 8900 series, which are well suited for high profile architectural, institutional and other





commercial applications. The 7900/8900 series conforms to the requirements of ANSI A156.4 Grade 1 and offers the perfect combination of durability, reliability and appearance. Both offer spring power adjustment, self-adjusting backcheck and optional delayed action. In addition, the 8900 series is finished with an aesthetically pleasing platform style arm assembly as well as a backcheck positioning valve. Both the 7900 and 8900 series are available with a wide assortment of specialty arms, plates and brackets to suit a variety of applications, as well as electroplated architectural finishes.

### DynaLock Classic 2268 Maglock



The Classic 2268 low profile series maglock (2-3/16" x 2") is back and available from DynaLock Corp. The 2268 Series projects only two inches into the door opening providing the greatest clearance of any full size maglock for door heights of seven feet or less. It's ideal for retrofitting existing installations. The 2268 maglock exerts 1200 lbs. holding force, is field selectable 12 or 24VDC and includes built-in surge protection. Popular options include rectifier for AC input, time delay, architectural finishes and door position and lock status sensors.

### Marks USA Electrified Grade 1 Lockset

Electrified Survivor Series locksets with the "Clutch" are available for operation as either electrically locked



or unlocked. When locked, the survivor's clutch disengages the outside lever allowing it to turn freely without opening the latch. Marks locksets with the "Clutch" survive where rigid levers fail. Proprietary lever support spring eliminates lever droop. Marks USA locksets feature a lifetime mechanical warranty. Survivor locksets are UL listed for 3-hour fire rating and satisfy all ADA requirements.

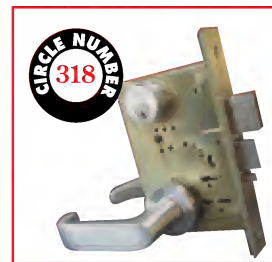
### Omnia Line of Vintage Finish Locksets



Omnia's new line of vintage finish entrance handlesets and tubular latchsets imparts the look of aged brass, copper or iron to a striking collection of solid brass designs. The knob and lever designs, along with the Manor and Tudor handlesets, are currently being offered in each of three finishes, which compliment an existing line of Vintage cabinet hardware. They work beautifully with a wide range of antique, period

restoration and traditional applications.

### Sargent Classroom Security Mortise Locks



Sargent has four new Classroom Security function mortise locks to address the

security issues present in schools today. These new locks incorporate security features including 12 gauge steel case, inside cylinders, which lock and unlock the outside handles, vandal resistant trim options and electromechanical options. Optional deadbolts and guardbolts provide additional security. The new Classroom Security functions are available with Sargent's patented V-10 and Signature cylinders, conventional cylinders, removable and small-format interchangeable cores.

### SDC Power Supply with Isolated Battery Charger



The new SDC 634RF modular power supply is specifically designed for use with access controls and electric locking hardware. While the exclusive isolated 500mA charging output is maintained precisely at 12V or 24 VDC. Sensitive access control and hardware components are protected from over voltage while batteries are charging. In addition, the specified current capacity is not derated for battery charging.

The large 16 gauge, 16" x 14" x 6.5" cabinet accommodate twelve door control modules and six 7-amp hour batteries (42 Amp Hour). Features include field selection of one 4 amp output or two 2 amp Class 2



outputs, field selectable regulated and filtered 12/24VDC output, fire emergency release relay input, low battery disconnect and system status LED indicators.

### Securitech ARTE



ARTE, A-Request-To-Exit, lever from Securitech features built-in switches to release electromagnets or send signals to access control or alarm systems. ARTE eliminates the need for separate request-to-exit button, which may violate ADA, Life Safety or "No Special Knowledge" codes. Lever movement also retracts a mortise or cylindrical latch lock eliminating the need for two-action existing. ARTE may be ordered with or without a latch-lock function.

### Sentrylok E-Latch



Sentrylok's new E-latch is designed specifically for use on narrow style aluminum entryways where access control is desired. Installation is quick and easy as it fits into a standard 6 7/8" x 1" latch lock cutout on the door. Tested to over 300,000 continuous

cycles, the E-latch is a reliable fail secure electrified locking device. Additionally, the E-latch retains all of the features of the mechanical version including latch holdback, and use with a mortise cylinder and push paddle for instant egress. Available in 12VDC and 24VDC, 31/32" and 1 1/8" backsets, with field reversible handing.

### SOSS Invisible Hinge



SOSS Invisible Hinge is the perfect hinge for most types of applications where no hardware is visible from either side when the door is closed. This provides security and a clean look. Available in many sizes ranging from light to heavy-duty and in a spring door closer. SOSS Invisible Hinges and closers are also available for fire rated applications starting at 20 minutes to 3 hours.

### Trilogy Waterproof Digital Lock

The Trilogy T3 DL3000 single access digital lock with audit trail now comes in a waterproof model. Made for outdoor applications and able to work in most climates and weather conditions, the DL3000WP provides unmatched security anywhere access to property and people must be carefully controlled. The T3 can be programmed via a handheld infrared printer or your own PC. It features a 1600 event log which can be printed



at your PC or the optional AL-IR1 printer to track who enters your premises and when. You can also print out your user code list in order to keep it current. Other features include 150 scheduled events, 300 user codes with multiple-level access, user lock mode, keypad & download programming using Alarm Lock's DL-Windows software, ADA-compliant leverset clutch design and its UL listed. **TNL**

## Picking & Impressioning



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#PI

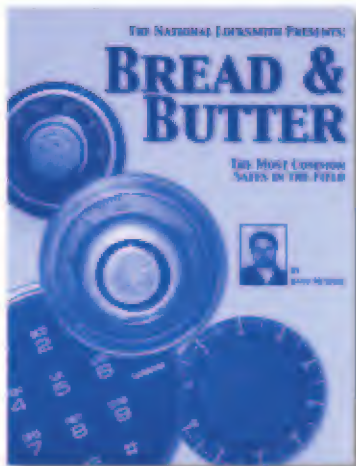


# DHI EXHIBITOR BOOTH LISTINGS

COMPANY	BOOTH #
A & J Washroom Accessories.....	1403
ABH Mfg. ....	735
Access Hardware Supply.....	1041
Access Information Technologies, Inc. ....	502
Accurate Lock and Hardware Co. LLC.....	610
Adams Rite Manufacturing Co. ....	1203
Air Louvers, Inc., JL Industries, Hiawatha Inc.;.....	942
Alarm Lock Systems, Inc. ....	1303
Algoma Hardwoods, Inc.....	1017
Ambico Limited .....	508
American Specialties.....	1228
Ampco Products, Inc. ....	1304
Amweld Building Products .....	1103
Anemostat Door Products .....	1122
Architectural Control Systems.....	1101
Auth Florence .....	815
B.E.A., Inc. ....	1301
Baillargeon.....	1428
Baron Metal Industries Inc.....	839
Baton Security Products.....	745
Benchmark Commercial Division of General Products	419
Best Access Systems .....	711
Bobrick Washroom Equipment, Inc. ....	306
Bommer Industries Inc.....	827
Boyle & Chase, Inc. ....	1317
Bradley Corporation.....	1202
Buell Door Co. ....	413
C.R. Laurence Co., Inc. ....	1512
Cal-Royal .....	1416
Capitol Partitions Inc.....	207
Ceco Door Products .....	1415
Chicago Metallic.....	1522
CHMI (Custom Hardware Mfg., Inc.) .....	1232
Clark Security Products.....	600
Comsense Inc.....	1241
Comtec Industries.....	1509

COMPANY	BOOTH #
Construction-Zone.....	1235
CORRIM Company.....	1504
Crown Industrial .....	1339
Custom Doors Inc. ....	540
Cutler Mfg. Corp.....	941
Daybar Industries Ltd.....	1422
Dayton Industries Inc. ....	740
Deansteel Manufacturing Co. Inc. ....	1036
Detex Corp.....	427
Direct Security Supply Inc. ....	1231
Don-Jo Mfg.....	1227
Door and Hardware USA, Inc. / DHUSA.com .....	1444
Door Components, Inc. ....	300, 402
Door Controls International .....	821
DORMA Architectural Hardware.....	1003
DSM Fine Chemicals.....	442
Dunbarton.....	1116
DynaLock Corp.....	744
Eclipse .....	103
Edgcomb Metals .....	536
Eggers Industries .....	1319
ESSEX Industries/ASSA ABLOY.....	603, 803
Field Enterprise .....	400
Fleming .....	513
Florida Made Door Co.....	840
FSB-USA.....	206
Georgia-Pacific Corp. ....	239
Glasslam .....	1524
Global Door Controls, Inc. ....	1515, 1517
Hadrian, Inc. ....	512
Hager Companies.....	613
Haley Bros. Inc. ....	409
Hardware Corporation of America.....	1200, 1302
Harney Mfg. Co. ....	339
Hettich America L.P. ....	519
HID Corporation .....	739

COMPANY	BOOTH #
Houston Grand Entrances .....	646
HPC Inc. ....	1506, 1508
Ideal Architectural Door and Plywood .....	1137
Ilco-Unican Corp. ....	627
Ingersoll-Rand Company .....	1209
Intertek Testing Services .....	1328
J.L. Industries .....	940
Jacknob Corp. ....	435
Jensen Industries .....	1042
JLM Wholesale Inc. ....	844
Karona, Inc. ....	444
Kewanee Corp. ....	936
Killeen Security Products.....	819
Krieger Steel Products Co. ....	1141
L.E. Johnson Products, Inc.....	340
L.L. Building Products Inc.....	1421
Larsen's Manufacturing. Co.....	227
Leatherneck Hardware, Inc.....	439
Locksmith Publishing Corp.....	628
Lund Equipment Co. Inc. ....	620
Mann McGowan .....	309
Markar Products, Inc.....	1309
MARKS USA .....	733
Marlite .....	508
Murray Enterprises, Inc.....	1401
Meek Manufacturing Company .....	1400
Mesker Door Inc. ....	535
Messon International.....	743
Mifab Mfg.....	842
Millennium Door .....	1242
MMF Industries.....	702
Mohawk Flush Door, Inc. ....	233
Monaco Lock Company.....	203
Mont-Hard Corporation.....	1035
National Custom Hollow Metal .....	1404



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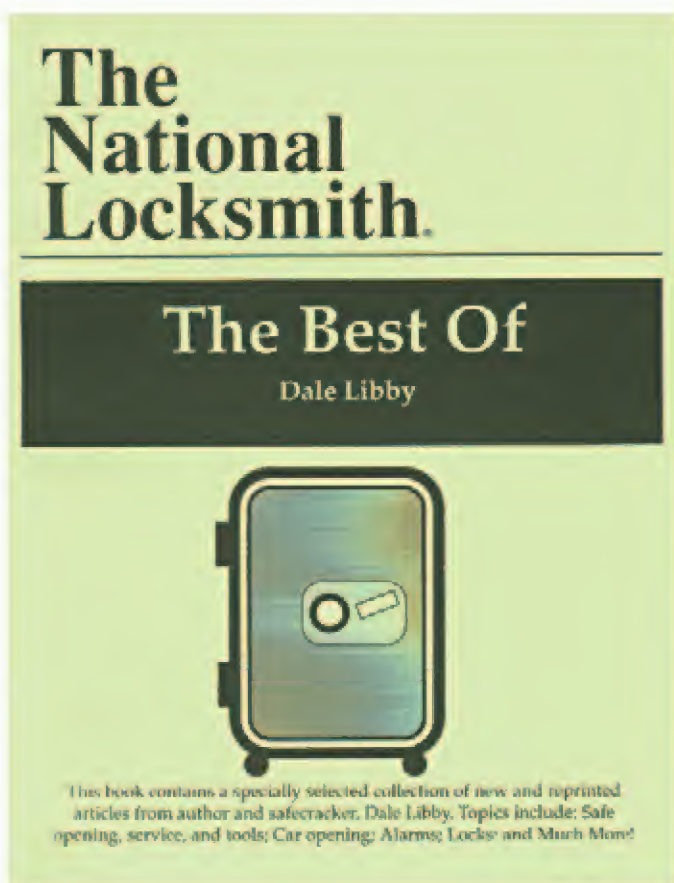
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#BB - 01





# The Best Of Dale Libby



This book includes the best articles written by Dale Libby over the course of many years, going back well over ten years! Now you can have this terrific collection of safe opening articles, automotive articles, and more.

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#DALE

COMPANY	BOOTH #
National Guard Products, Inc. ....	1027, 1127
Next Door Company.....	212
NGFL Incorporated .....	240
Norfield Industries.....	315
North American Door Corp. ....	303
Odice SA- Fire Protection .....	243
Ohio Valley Door Corporation.....	1331
Omnia Industries, Inc. ....	604
Oshkosh Architectural Door Co.....	916
OSI Security Devices.....	1434
Overly Door Company.....	1503
Partition Systems, Inc. ....	639
Patrick Young Sing & Company Limited .....	641
PBB, Inc. ....	1238
PDQ Industries, Inc. ....	504
PEMKO .....	719
Pioneer Industries, Inc. ....	622
Precision Hardware Inc. ....	630
Pyrophobic Systems Limited.....	837
Quick Draw Southwest.....	1201
R.K.S. Tool & Die, Inc. ....	1521
R.R. Brink Locking Systems, Inc. ....	1103
RCI .....	304
RectorSeal .....	210
Reese Enterprises, Inc. ....	433
Republic Builders Products Company.....	935
Richards-Wilcox Manufacturing .....	1341
Rockwood Mfg. Co. ....	1327
Rofu International Corp.....	509
Ryobi Closers-Door Controls/L. David Ind., LLC.....	531
S. Parker Hardware Mfg. Corp. ....	523
Saflok .....	1427
Safti, a Div. of O' Keefe's Inc. ....	742
Sanymetal - A Crane Plumbing Company.....	412
Sargent & Greenleaf Inc. ....	204
SDC - Security Door Controls.....	633
SECO Hardware Co., Inc.....	715
section10net.com.....	403
Secugen.....	542
Securitech.....	416
Security Acoustics, a Div. Security Metal Products ..	1438
Security Lock Distributors .....	1411
Select Products Limited.....	1513
Shanahan's Manufacturing Ltd. ....	644
Soss Invisible Hinge.....	405
Special-Lite Inc.....	127
Stanley Hardware .....	927
Summit Door Inc.....	741
Tanner Bolt & Nut Corp.....	414
Taymor Industries.....	301
Technical Fibre Products .....	401
Technical Glass Products .....	643
Tempo Import & Export, Inc.....	1402
TENMAT Inc.....	1337
The Combination Door Company .....	642
The Maiman Company.....	443, 445
<b>The National Locksmith .....</b>	<b>1420</b>
Therma-Tru Corp, HMF Division.....	835
Timely Industries .....	527
Trans - Atlantic Co. ....	410
Trimco/BBW/Quality .....	812
Trimec .....	313
Trine Access Technology.....	503
Tubular Specialties Mfg. ....	500
Ultra Industries Inc., A Macklanburg - Duncan Co. ....	1142
Underwriters Laboratories, Inc .....	440
United Brotherhood of Carpenters.....	1421
Van Duerr Industries.....	505
Vancouver Door Co. ....	541
Vetrotech Saint-Gobain.....	345
Visel America.....	1038, 1040
Visonic Inc. ....	341
VT Industries Inc.....	321
Warm Springs Composite Products.....	411
WDW - Web Design Werks .....	1343
Weyerhaeuser - Door Division .....	727
Wing It Innovations.....	545
Woodfold Marco Mfg. Inc. ....	836
Woodtech Trading Co. ....	1131
Yale Security Group .....	903
Zero International Inc.....	328

TNL



# Get a Lock on Security

by Bill Espinola

**W**hile much has been written on key control and prevention of unauthorized access with patented key systems and devices that use mag stripe cards, keypads or I-buttons, little has been said about the actual physical protection of the door.

Locks are such an integral part of a security system that they are often taken for granted. We focus on the means by which people access a door and neglect what actually holds it closed. The most sophisticated access control system can be defeated by a lock that is inappropriate for the security or performance level of the opening on which it is installed.

## Double Check Mortise Lock Grades

A case in point starts with the selection of either a mortise or cylindrical locks and specification of the proper ANSI/BHMA grade of product. While most classes of

products have only one grade designation (Grade 1 is Grade 1), Mortise locks are unique in that they have a two-grade system. These popular devices offer some of the highest security available among widely used lock designs. For mortise locks, ANSI/BHMA Standard A156.13 is unique in that it splits the performance and security standards into two separate components. Thus, it is not enough to specify a "Grade 1" mortise

lock without clarifying the specification for both performance and security. The result could be a Grade 1 (highest) performance with only Grade 3 (lowest) security. While this may be satisfactory for some applications, the specifier should recognize the difference.

The Builders Hardware Manufacturers Association (BHMA) and some of the major lock manufacturers

**Mortise locks are graded separately for both performance and security.**



**Mortise locks offer the highest level of security.**





are trying to increase awareness in the marketplace that the standards for mortise lock products have these two facets. This is necessary to ensure that the lock meets both requirements and that similar hardware is quoted by all bidders. A company offering a Grade 1 performance and Grade 1 security product may not be competitively priced with one offering Grade 1 performance but Grade 3 security or no security grade at all. Security grades may even be affected by the trim package specified with the mortise case. An excellent source of information is available in the *Directory of Certified Locks & Latches* published by BHMA. The products listed in this directory are part of a "Certification Program" in which all of the products listed are subjected to third party testing to insure that they do indeed meet their manufacturers claims.

Adding security levels to the product as in adding any other feature has the potential to increase the cost. It is important to know what is needed for your application and specify the correct level. A relatively benign environment, such as an office park, may not have security requirements

against physical attack, especially when other security devices such as CCTV or roving security guards may be provided. For an installation in a high-crime area or one that is not well-protected by other means, it may be necessary to specify not only restrictive access control functions, but also a lock that is Grade 1 in security as well as performance.

### **Security Considerations for Other Locks**

Cylindrical locks, which do not have a separate security grade or test, can

be paired with an auxiliary deadbolt, as listed in A156.5 to achieve greater security. Cylindrical locks are listed under ANSI A156.2, which describes all classes of cylindrical locks and covers primarily material evaluation and performance requirements.

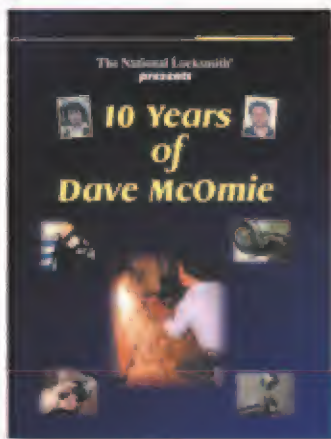
Deadbolts, like cylindrical locks, do not have separate grade classifications. However, to be qualified as a Grade 1 product, a deadbolt must pass both Grade 1 operational and security requirements, because it is primarily a security product.

**The**



**Schlage D-Series cylindrical lock with keyed lever trim also is available with Vandlgard, a feature that allows the locked lever to rotate freely while remaining securely locked.**

## **10 Years of Dave McOmie**

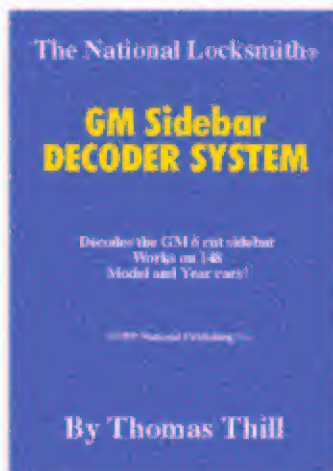


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#DM - 10

## **GM Sidebar Lock Decoder System**



Tom Thill, the author of a new book, has invented an amazing new way to make keys for six cut GM Sidebar Locks.

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#TT - 1





A Schlage D-Series lever trim with Patented cylinder and key control systems can provide higher security but are also more costly.



A Schlage B260 deadbolt.

## Safe Opening Volumes 1-5



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#SO - 1, SO - 2, SO - 3, SO - 4, SO - 5

### Tradeoff of Convenience vs Security

Interchangeable cores are representative of the constant tradeoff between security and convenience when choosing a lock. Most interchangeable core cylinders are Grade 2 security, and non-interchangeable cores will offer higher security than interchangeable core designs. The dilemma is whether the need is greater for the convenience of easy rekeying with an interchangeable core or the added security provided by a non-interchangeable core product. Some interchangeable core locks will pass Grade 1 security when equipped with expensive shielding, but this may significantly increase the cost of the cylinder.

**T**he cost factor is an inherent part of lock selection, making it a three-way tradeoff between cost, convenience and security. A Grade 1 lock offers higher security but comes at a higher price. Patented cylinder and key control systems can provide higher security but are also more costly. Each level of increased security comes with a higher price tag. Greater security also may reduce convenience, either for users or building owners.

At some point, the architect, property manager or other individual



Most interchangeable core cylinders are Grade 2 security.



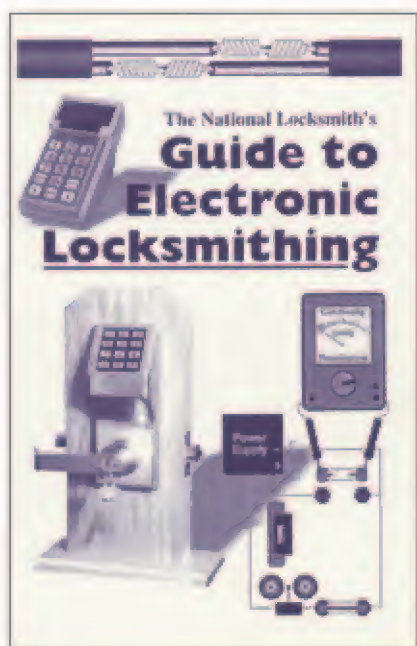
will need to make the decision on what level of security is required for the specific installation, within the framework of cost and convenience. Most often, this choice starts with determining what you are trying to protect. Points to consider include the possibility of an attack against the building's occupants, the value of the building contents, and whether the contents are easily replaceable, if at all.

### The Role of Trim

Trim also plays a key role in determining durability and security. Because it is exposed to use and abuse, it is the most vulnerable portion of a lock product. To meet a particular security grade, a lock must undergo



A "D" series lever trim with Primus cylinder.



## Electronic Locksmithing

Everyone knows there's big money in selling, installing and servicing electronic security such as mag locks, electronic strikes, and simple access control.

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#EL - 1







Trim plays a key role in determining durability and security.

the specified level of abuse and still remain locked and protecting the contents or occupancy of the building.

As an example, one of the requirements to be classified as Grade 1 Security under A156.13, a lever trim must withstand 175 ft. lbs. of torque applied to the outside lever and remain locked. The lever can be damaged, or a security feature such as a break-away spindle may be activated, but the lock must remain

secure. Grade 2 lever trim must withstand 120 ft. lbs., and Grade 3 need only withstand 55 ft. lbs.

The most common abuse to lever trim is a physical attack of one kind or another. The same advantage that makes this trim beneficial to those with disabilities also makes it easier to damage. Where it took a pipe wrench to break a doorknob, lever trim provides every lock with the equivalent of a pipe wrench because it



Designer handles add elegance to any door.

gives the physical leverage needed to cause damage.

This damage can be lessened or prevented with one of the breakaway levers now available on some cylindrical locks. Using a variety of clutching or breakaway mechanisms, they defeat the excess force that could damage the trim and the lock itself. After releasing, the lever may be at a 60 or 45 degree angle instead of a horizontal plane, making it more difficult to attack. Most mortise lock manufacturers offer spindles that are designed to break before the torque damages the lock case. The lock itself remains secure, and only the inexpensive spindle must be replaced to make the lock operational again.

**T**hese are just some of the factors that must be considered when weighing the need for security against other factors. Choosing the right lock to provide the best combination of security, durability, convenience and safety requires as much forethought and consideration as any other access control component. An inappropriate lock can become the weak link in an otherwise well-planned access control system.

For more information on lock selections and specifications, contact Schlage Commercial Lock Division: Phone: 800-847-1864; Fax: (719) 264-5382; Web: [www.schlage.com](http://www.schlage.com). Circle 283 on Rapid Reply. **TNL**

## Guide to Motorcycles



For years locksmiths have begged for a comprehensive service manual on motorcycles and it's finally here!

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#MOT - 2

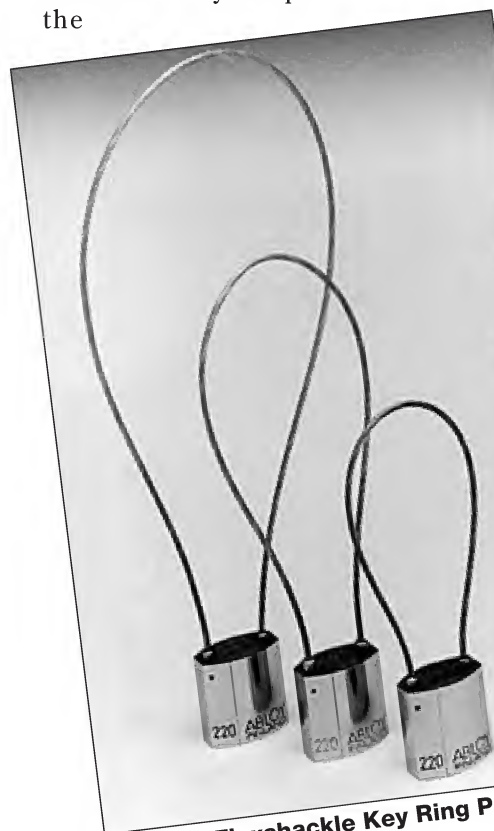




# Key Control Products

## ABLOY's Flexshackle Key Ring Padlocks

The ABLOY FX220 Series padlock with plastic coated stainless steel cable offers the ability to control route keys. Once locked, keys cannot be removed from this cable without an authorized key to open the



ABLOY's Flexshackle Key Ring Padlocks

lock.

The cable can be replaced if damaged. ABLOY FX-Series padlock features the reliable ABLOY Detainer Disc Cylinder, which is virtually pickproof and provides extensive master keying capabilities. FX-Series padlocks can be masterkeyed together with other ABLOY cylinders.

The mechanical operation ensures lasting durability, even in extreme environments. Chrome plated brass lock body provides resistance to corrosion. Heel and toe locking provides the strength needed to stand

up against prying and pulling. The stainless steel ball bearings deadlock the shackle at both ends for a strong hold. Standard overall cable lengths are 9", 15" and 21", but custom lengths are also available.

*For more information circle 300 on Rapid Reply.*

## Buddy Key Management

Repli-Key, the multiple key management system from Buddy Products, is designed to enable you to keep maximum control of master and duplicate keys. The system



Buddy Key Management

track up to 90 master keys and loan keys in three ways and units come complete with and Index/Cross Reference binder. Also available in a 56 capacity desk drawer tray.

*For more information circle 301 on Rapid Reply.*

## HPC Key Control

The HPC color filled Key Control Series is an exciting way to keep track of your keys. This vibrant series includes an eight capacity plastic KeyRack and a 20 capacity high-gloss white metal KeKab. All three models come with brightly colored plastic key



HPC Key Control

tags that pop open revealing an area for you to write the description of your key. The tags come in two styles: standard (for SlimKabs and KeyRacks) and slotted (for HPC KeKabs).

The color filled KeyRack holds eight different colored tags, the color-filled SlimKab holds two each of the 10 different colored tags and the color-filled KeKab contains three each of the 10 different colored tags. The Color-filled tags are also available separately.

*For more information circle 302 on Rapid Reply.*

## Key Kop I and II

Monarch offers a unique locking key ring for rigid control of keys. It eliminates welding/soldering of rings each time a change must be made. By offering a choice of three locks, Tubular, Duo, or Medeco, the security professional may select

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17





**Monarch's Key Kop I and II.**

aluminum body, recessed lock and a well secured stainless steel shackle creates a tamper evident system unmatched in durability of similar products. Available in 1 1/2", 3", 5" and 7" length shackles (measured assembled).

*For more information circle 303 on Rapid Reply.*

### **Lucky Line Key Organizer**

Lucky Line offers an economical key cabinet for home and office



**Lund Key Cabinet.**

units appropriate for the level of security desired. Ideal for institutions such as Hospitals, Universities, Factories, Fire/Security Services and many others.

Key Kop I is a seamless aircraft aluminum body with a recessed lock. It has a nylon coated stainless steel aircraft cable, which has the added protection of a stainless steel over-wrap to minimize abrasion and kinking. Available in 6", 8", 12" and 18" lengths (measured cable extended). Key Kop II also offers a seamless aircraft



**Lucky Line Key Organizer**

etc.

It leaves the keys in the outer compartment accessible. The locks are keyed differently. Lund offers more than 70 styles of key cabinets and panels, all complete with systems for controlling keys with capacities up to 3312 hooks.

*For more information circle 305 on Rapid Reply.*

### **Morse Watchman Keywatcher**

The Keywatcher key management system from Morse Watchman offers 24-hour key control with each key movement tracked by time, date and



**Morse Watchman Keywatcher**

user code for up to 1,000 users. An internal memory records 4,000 transactions. On-demand reports include audit trail, employee, overdue, keys in use and much more. Reports via stand alone printer or PC or modem.

*For more information circle 306 on Rapid Reply.*



# **AutoEdge**



This CD contains over 750 pages of automotive locksmith service.

**CLICK HERE TO LEARN MORE**

#AE - CD



use. The No. 61200 Key Organizer has a keyed lock for extra security and the master label and 24 numbered hooks allow cataloging of all keys. Supplied in beige and made of tough poly-propylene, it installs in minutes (screws included). Also available in a non-locking version (No. 61000).

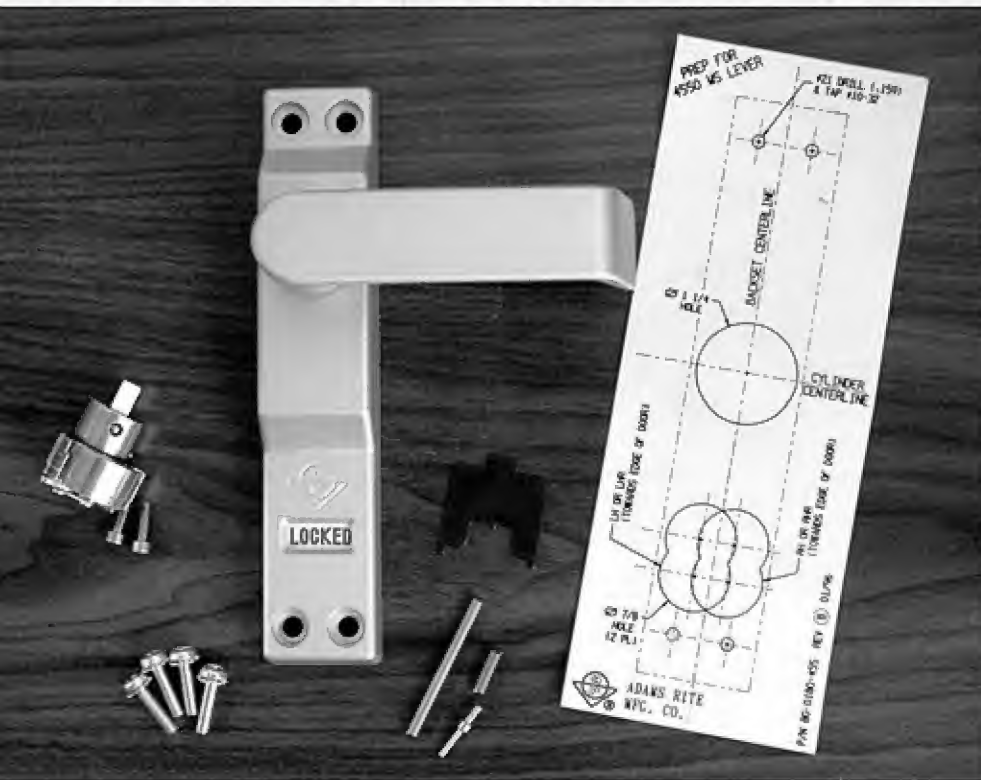
*For more information circle 304 on Rapid Reply.*

### **Lund Key Cabinet**

A new Lund Key Cabinet has a locking inner compartment and a locking exterior door as well. Designed to safeguard keys to private records, medical offices, engineering designs,



# Adams Rite MS<sup>®</sup> Lever



**1. The Adams Rite MS Lever comes complete with all parts, drilling template and drilling instructions.**



**2. Remove the deadbolt faceplate and the cylinder, thumb-turn or exit indicator on the stile.**

**W**hen Adams Rite first introduced the 4550 MS<sup>®</sup> Lever, it became a popular way to add an ADA-friendly lever to narrow stile aluminum doors. Designed specifically to operate Adams Rite's MS<sup>®</sup> Deadbolts, the 4550 is a cost-effective solution to upgrading existing interior cylinders or thumb-turns.

Recently, Adams Rite has reintroduced the MS<sup>®</sup> Lever, with an improved clutched cam assembly, for even more durable operation. (See *photograph 1.*) Three pounds of downward pressure on the natural grip handle is all it takes to retract the deadbolt, more than meeting ADA guidelines. The handle always returns to the horizontal position when released, with a clutch mechanism to protect the lever from abuse or vandalism. An upward pull will return the deadbolt to the locked position and the built-in indicator will display the door's locked or unlocked condition.

One feature of the MS<sup>®</sup> Lever that hasn't changed, however, is its easy installation. In this article, we'll take you step-by-step through the entire procedure for installing the 4550 MS<sup>®</sup> Lever.

## Stile Preparation

First, remove the faceplate on the deadbolt so that you can access the cylinder set screw. Then, remove the cylinder, thumb-turn or exit indicator on the stile. (See *photograph 2.*)

Mark a backset centerline on the stile, approximately four inches above and below the cylinder hole, for lining up the supplied drilling template (See *photograph 3.*)

Note: The 4550 will fit any Adams Rite deadbolt with a 31/32", 1-1/8" or 1-1/2" backset. It is not compatible with a 7/8" backset.

Attach the stick-on clear plastic template to the stile, lining it up with the cylinder hole and your centerline mark. (See *photograph 4.*)

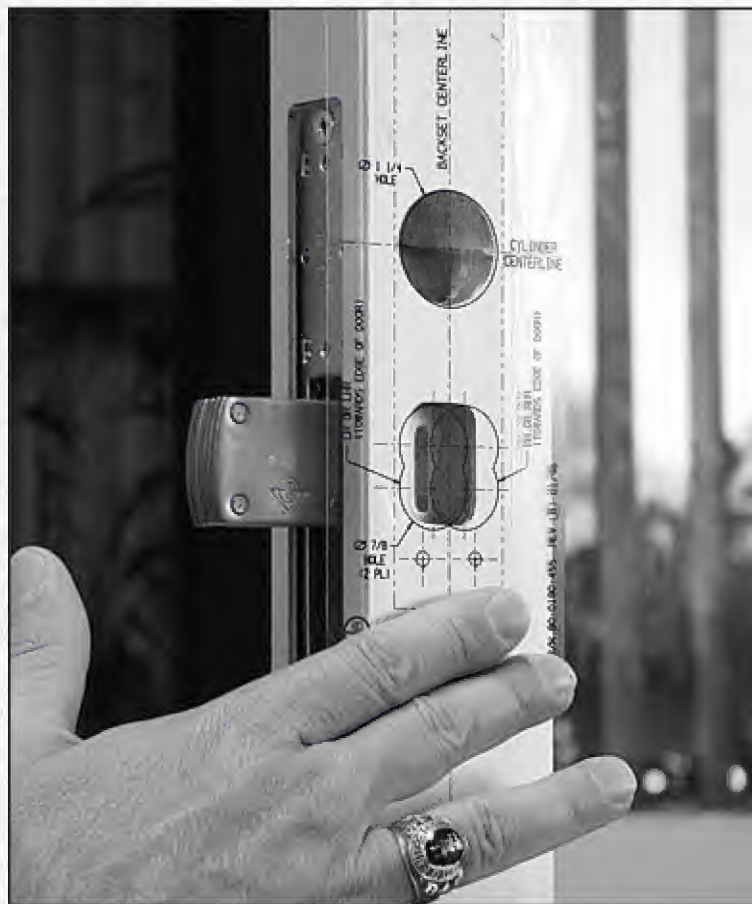
Center-punch and drill the four mounting holes and then tap for the supplied #10-32 screws. (See

September 2000 • 87

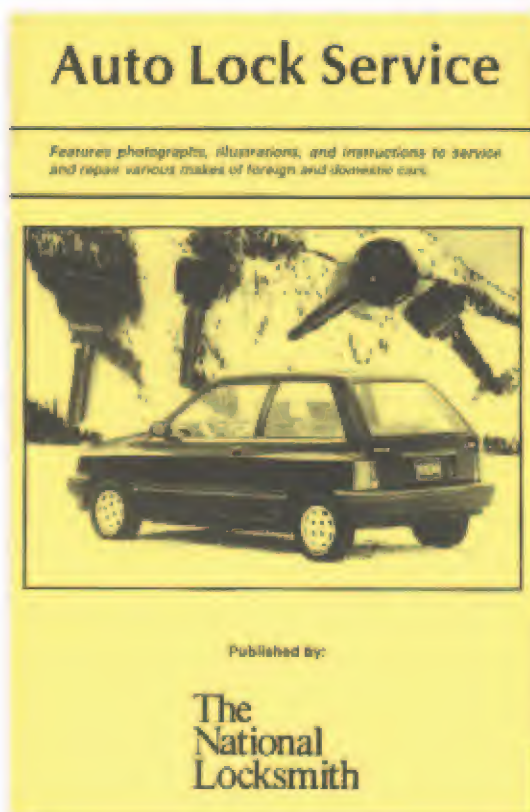




3. Mark a backset centerline on the stile



4. Attach the clear template, stick on drilling.



#ALS - 1

# Auto Lock Service

Covers opening and service techniques.

[CLICK HERE TO LEARN MORE](#)

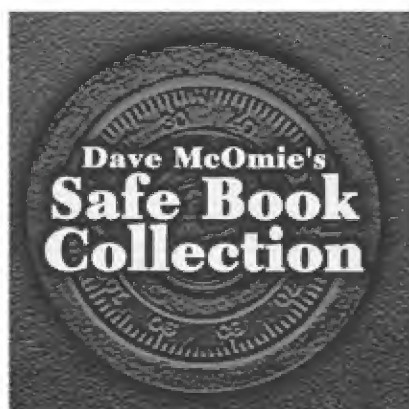






**5. Center-punch and drill the four mounting holes.**

## Dave McOmie Safe Book Collection on CD



This CD contains every book Dave has ever published.

[CLICK HERE TO LEARN MORE](#)

#DMCD - 1

## Dave McOmie NSO & Article Collection on CD



This CD contains every NSO newsletter and McOmie File Dave has ever published.

[CLICK HERE TO LEARN MORE](#)

#DMCD - 2



# Diary Of A Safeman

## Diary Of A Safeman

The journal of safeman C.L. Corey with details of safe cracking in the 1930s. Relive the days of Al Capone



With an Introduction by  
Dave McOmie

This book is a real gem...the private safe diary of old time safecracker C.L. Corey.

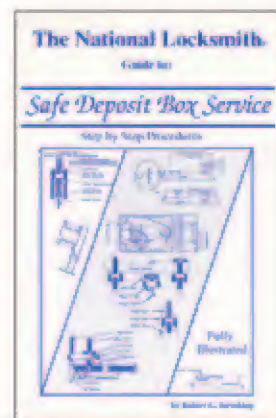
[CLICK HERE TO LEARN MORE](#)

#DIARY



6. Rotate the actuating hub until the cam arm bracket is horizontal to the cap screw holes.

# Safe Deposit Box Service



There is gold in safe deposit boxes!

[CLICK HERE TO LEARN MORE](#)

#SDBS - 1





7. Insert the cam and tighten the cylinder set screw.

# Flat Rate Manual

The  
National  
Locksmith.

## Flat Rate Manual For Locksmiths

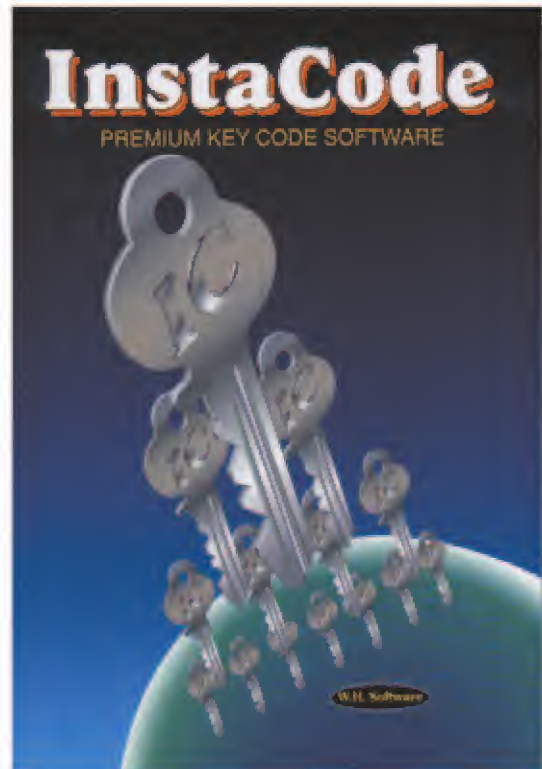
Auto Lock • Car Opening • Key Cutting • Rekeying • Installation •  
Domestic Auto • Code Keys • Duplication Keys • Masterkey Systems •  
Conversions • Key-Injector Locks • Import/Export Keys • Lockouts •  
Safe Work • Car Opening • Key Cutting • Rekeying • Installation •  
Domestic Auto • Code Keys • Duplication Keys • Masterkey Systems •  
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Domestic Auto • Code Keys • Duplication Keys • Masterkey Systems •

Now you can  
easily "Price  
for Profit!"

CLICK HERE TO LEARN MORE

#FRM - 1

# InstaCode



Your total code and code machine  
management program.

CLICK HERE TO LEARN MORE

#IC - 2001

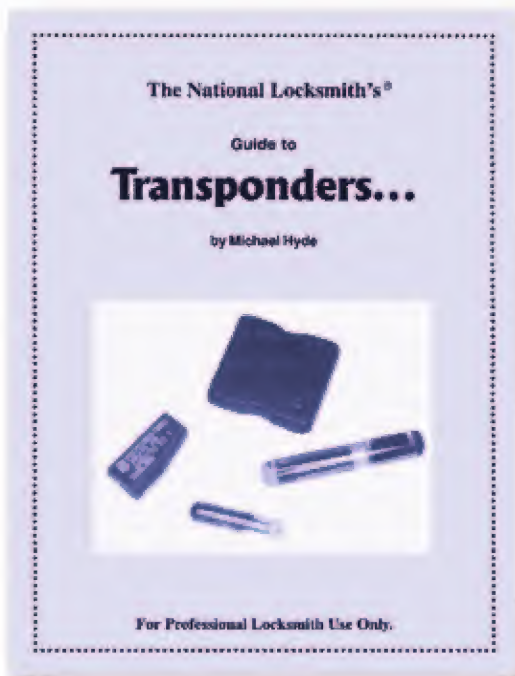


8. Using an Allen Wrench, install the two brass, socket head cap screws.



9. Check operation by rotating the actuating hub back and forth.

## TNL's Guide to Transponders



Over 350 pages in a handy binder to accept updates as needed.

[CLICK HERE TO LEARN MORE](#)

#TS - 2001

## Wafer Lock Reading



[CLICK HERE TO LEARN MORE](#)

#WLR - 1

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24



photograph 5.) If not previously prepared, you will need to drill two 7/8" holes for the exit indicator, following the template for right or left handing. The supplied instructions for installing the 4550 also includes simple directions for re-handing the lever, if you should need to do so in the field.

### Installing the Cam Assembly

Now that the stile is prepped, the next step is to install the supplied cam assembly. First, you need to make sure that the cam arms are in the proper position. Simply rotate the actuating hub until the cam arm bracket is horizontal to the cap screw holes. (See photograph 6.)

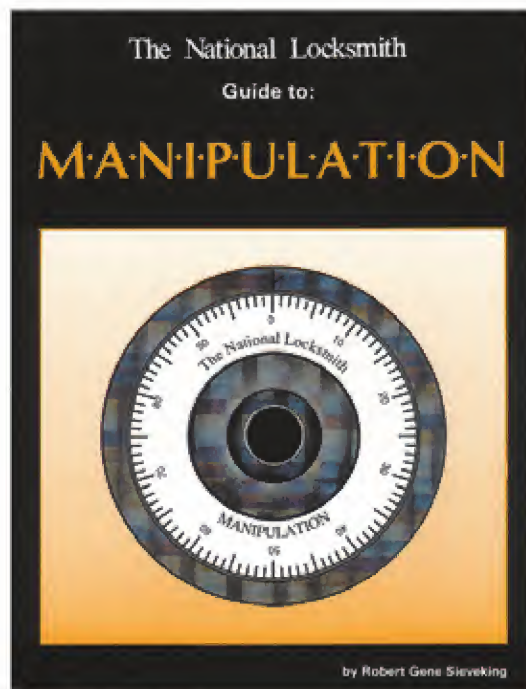
Insert the cam into the lock case and tighten the cylinder set screw on the front of the deadbolt. (See photograph 7.) Using a 7/64" Allen Wrench, install the two brass socket head cap screws through the face of the cam to a snug fit. Be careful not to over-tighten. (See photograph 8.)

Finally, check operation by rotating the actuating hub back and forth to project and retract the deadbolt. (See photograph 9.) Now you're ready for the final step.



10. Insert the exit indicator spring in the lower slot on the deadbolt.

## Manipulation Home Study Course



Our home study course guides you on step-by-step process, teaching you everything there is to know about manipulation.

CLICK HERE TO LEARN MORE

#MAN - 1

## Picking & Impressioning



CLICK HERE TO LEARN MORE

#PI





11. Make sure the exit indicator reads "LOCKED" through the window.

## TNL on CD



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#TNL - CD1

## The Ultimate Technitips Collection



Here's one of the most useful books ever available to the locksmith!

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#TIPS - 2



### Mounting the Lever Assembly

Before mounting the lever, rotate the actuating hub until the deadbolt extends and the hub makes a complete stop. Then, rotate the actuating hub back approximately one-quarter turn until the hole is at the 12 o'clock position.

Insert the supplied exit indicator spring in the lower slot on the deadbolt. An exit indicator pin is also supplied to

add to the spring for two and three point locking systems. (See photograph 10.)

Make sure that the exit indicator is in the down position so that "LOCKED" is showing in the window. (See photograph 11.) Place the lever on the stile, ensuring that the actuating hub spindle slides into the drive hub on the lever. (See photograph 12.) Do a quick test by simply operating the handle.

Finally, secure the lever with the supplied pan head screws and replace the deadbolt faceplate. (See photograph 13.) Do a final check on the operation of the lever and to make sure the exit indicator corresponds. (See photograph

14.) The handle should operate the deadbolt smoothly and effortlessly. If the lever is mis-located, it may stick. Simply loosen the screws and adjust the lever to the best location.

That covers the complete installation for the 4550 MS® Lever. The entire procedure can be done in under ten minutes. Your customer will get a durable lever that's easy to operate, while you get one that is easy to install. The MS® Lever is a terrific solution for you both.

For more information on Adams Rite products, circle 284 on Rapid Reply. **TRL**

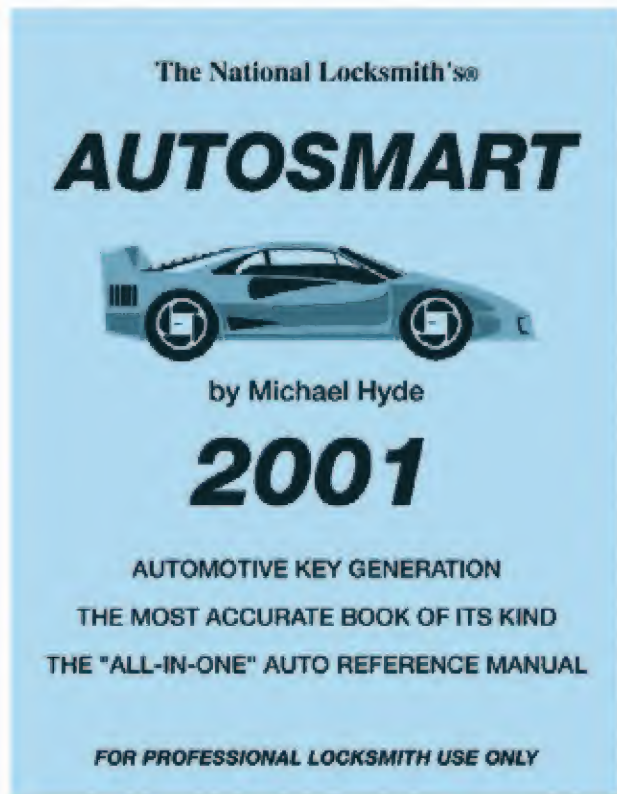


13. Secure the lever with the four pan head screws.



14. Completed Adams Rite MS Lever installation.

# AutoSmart



A MUST for every locksmith!

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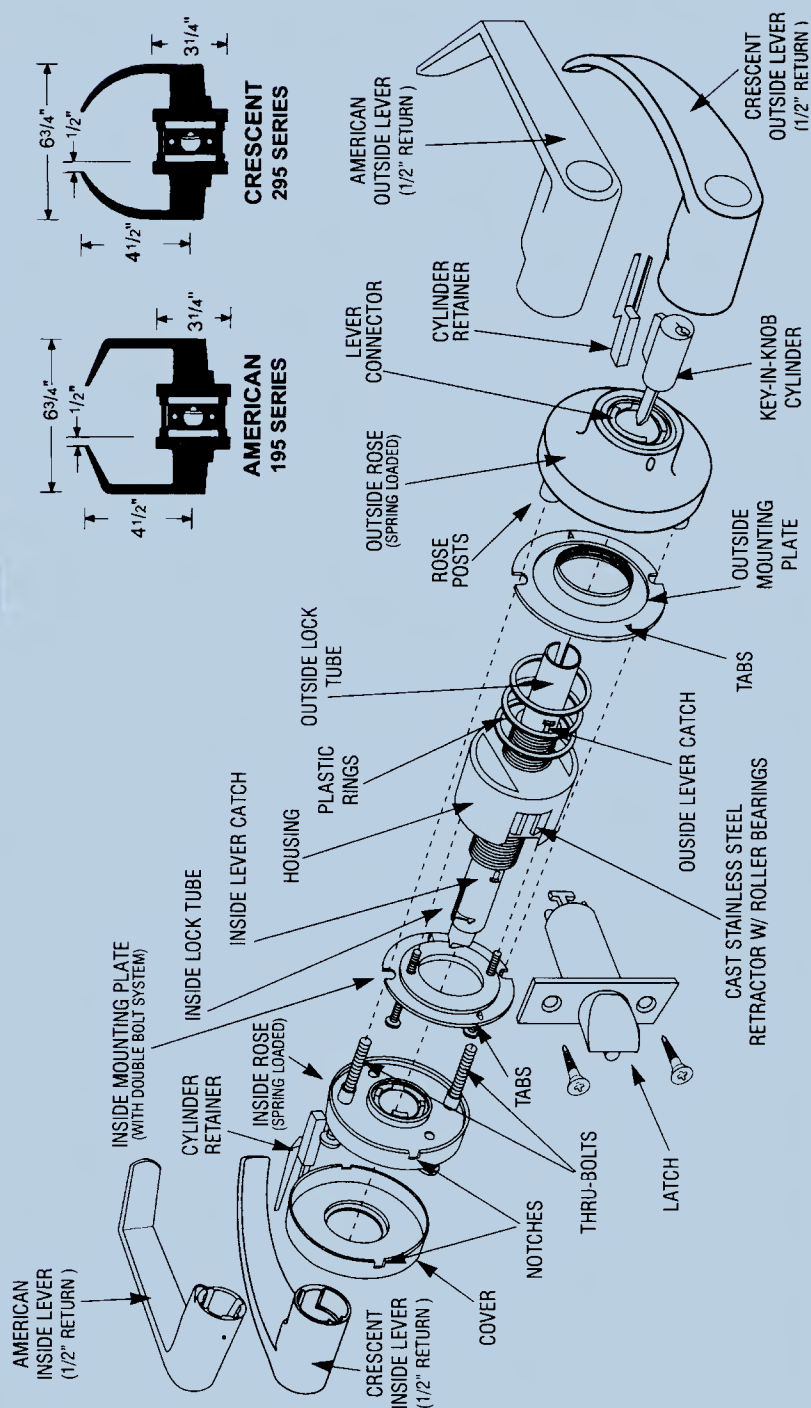




# EXPLODED VIEW

## Marks Survivor Series

MODEL	195 & 295
ANSI GRADE (1996 SPEC.)	1
LATCH ( BACKSET / GRADE )	2-3/4" / GRADE 1
THROW	9/16"
CYLINDER	6 Pin
KEYS	2 Nickel Silver
KEYWAY	MARKS "C"
I.C CORE MODEL AVAILABLE	YES
U.L. LISTED	3 Hr.
STRIKE	4-7/8" "ASA"





## ANSI (FUNCTION) CODE

**F75**

**PASSAGE**



**N**

Latch by lever either side.

**F76**

**PRIVACY**



**L**

Latch by lever either side unless outside lever locked by push button from inside. Outside unlocks by turning inside lever, or outside emergency button or closing door.

**F77**

**PATIO**



**P**

Latch by lever either side unless outside lever locked by push button inside. Unlocks by turning inside lever or closing door.

**F80**

**COMMUNICATING**



**DC**

Key in both levers.

Locks or unlocks either lever independently of the other.

**F81,F82**

**ENTRANCE**



**AB**

Outside locked by pushing turn button inside. Key outside opens lock. Rotating inside lever releases button and outside lever. By pushing and turning inside button, outside lever remains locked.

**F83**

**EXIT**



**AQ**

Deadlocking latch by lever either side except when outside locked by turn button inside. Inside lever always opens latch. Turn button must be manually operated to unlock outside.

**F84**

**CLASSROOM**



**S**

Latch by lever inside.

Outside lever locked or unlocked by key inside.

## ANSI (FUNCTION) CODE

**F86**

**STOREROOM**



**F**

Latch by lever inside, key outside. Outside lever always rigid.

**F87**

**INSTITUTION**



**DW**

Both levers always rigid. Latch by key both sides.

**F88**

**VESTIBULE**



**DA**

Latch by lever either side, except when outside lever locked by key inside. Key outside retracts deadlocking latch. Inside always open.

**F89**

**EXIT**

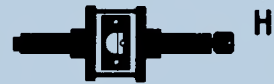


**FQ**

Deadlocking latch by lever inside. Outside always locked.

**F93**

**HOTEL**



**H**

Deadlocking Latch by lever inside. Outside lever always rigid. Inside push button projects indicator on cylinder face shutting out all keys except emergency key. Turning inside lever or closing door releases push button.

**DUMMY TRIM**

Outside only, rigid.



**D0**

**DUMMY TRIM**

Both sides, rigid.



**DT**

**EXIT**

Blank outside.

Latch by lever inside.



**NB**

**COMMUNICATING**

Blank outside. Inside

lever locked or unlocked by key inside.



**SB**



# TECHNITIPS

## YEAR-END PRIZES



### **Grand Prize**

Silca Bravo Duplicator



### **1st Prize**

HPC's 1200PCH  
Punch Machine



### **2nd Prize**

Mas Hamilton's  
PowerLever 2000



### **3rd Prize**

Curtis 2200 Duplicator



### **4th Prize**

SDC Magnetic Lock,  
Keypad and Exit Switch



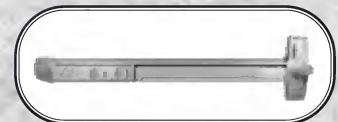
### **5th Prize**

Securitron 12-Volt Unlatch Plug in  
Trans & Touchpad Retail Value \$650



### **6th Prize**

LaGard "SmartGard"



### **7th Prize**

Detex Advantex



### **8th Prize**

Arrow 400 Series Alarmed  
Exit Device & S-75 Mounting  
Plate Kit for Narrow Stile  
Aluminum Doors



### **9th Prize**

\$500 in BWD Products



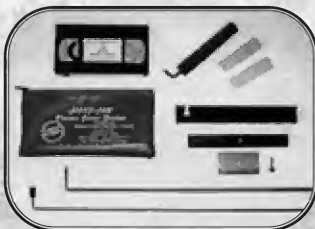
### **10th Prize**

\$500 in ASP Auto Locks



### **11th Prize**

\$500 in Strattec Auto Products



### **12th Prize**

Tech-Train "Jiffy Jack"



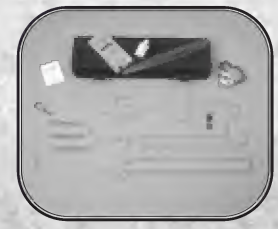
### **13th Prize**

Sargent & Greenleaf 6120  
Electronic Safe Lock



### **14th Prize**

High Tech Tools  
2000 Pro Set



### **15th Prize**

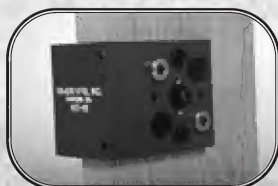
Slide Lock's Master "Z" Tool Set





**16th Prize**

ESP Products Sampler



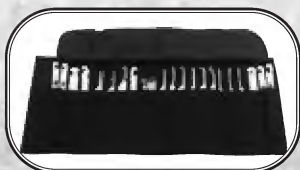
**17th Prize**

Major Manufacturing's  
HIT-111 Drill Guide



**18th Prize**

Abus Padlock's Marine  
Padlock Display (\$120 Retail)



**19th Prize**

Mark Bates Associates  
Falle Pick Set



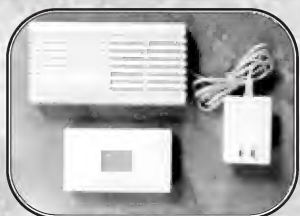
**20th Prize**

Baxter JV-1 & JV-5  
Code Books



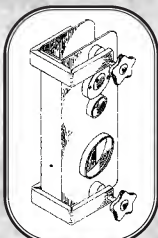
**21st Prize**

Sieveking Products  
Squeeze Play



**22nd Prize**

Rodann's TX 500  
RX 5990 Wireless Door  
Annunciator System



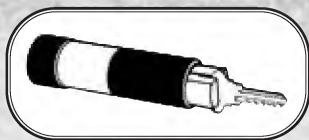
**23rd Prize**

A-1 Security Manufacturing  
Installation Jig



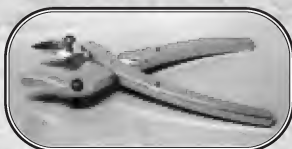
**24th Prize**

Keedex Sampler



**25th Prize**

Framon  
Impressioning  
Handle



**26th Prize**

Gator Tool Multi-Purpose  
Facecap Tool

## These Prizes Awarded Each Month!

- BWD Automotive Ford or GM KwiKit
- Wedgeco™ Key Extractor Kit
- Strattec Racing Jacket
- HPC Air Wedge™
- Sargent And Greenleaf 4400 Series Safe Deposit Box Lock
- A-1 Security Products
- ILCO Key Blanks (100 Blanks)
- Keedex "SPIN OUT" Screwdriver
- Tech Train Training Video
- Sieveking Products Gm E-Z Wheel Puller
- Major Manufacturing Products
- Slide Lock's "Z" Tool Opening Set
- The Sieveking Auto Key Guide
- Jet Key Blanks (100 Blanks)
- High Tech Tools
- LaGard Combo Guard

### Send in your tips, and win!

#### How To Enter

Send a tip on how to do any aspect of locksmithing. Certainly, you have a favorite way of doing something that you would like to share with other locksmiths. Write your tip down and send it to:

Jake Jakubowski, Technitips Editor,  
The National Locksmith  
1533 Burgundy Parkway  
Streamwood, IL 60107-1861

Or send your tips via  
E-mail to: Natllock@aol.com

#### Rules & Regulations

Each tip submitted must include your full name, street address (no P.O. Box numbers), city, state, zip code, phone number, fax number or e-mail address.

#### Every Tip Published Wins

If your tip is published you will win one of the monthly prizes listed. At the end of the year, we choose winners from all the monthly tips published, that will be awarded one of the fabulous year end prizes. All you have to do to win is enter.

Prizes are arranged according to suggested retail price value.

Tips Start  
on Next Page







**BWD KWIKIT WINNER:  
Spare Tire Key**

A dealer called me regarding a 2000 Ford Ranger without a spare tire key. I didn't have the blanks (H83F which is about 4" long), however, I found that a X7 blank for Nissan could be easily modified to work.

I simply trimmed about .005 off both sides of the blade so the shoulders would fit into the key stop. Then I cut the key by code. The code is stamped on the face of the lock. I then trimmed the extra length off of the tip of the key after cutting it to code.

Although not the best fix in the world, it worked and was better than no key at all.

*Stan Moffett  
Arizona*

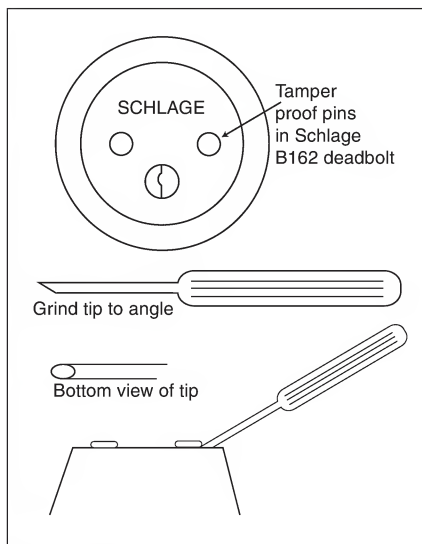


**WEDGECO KEY  
EXTRACTOR WINNER:  
Removing Schlage  
Security Caps**

We've all struggled with the security caps that Schlage recommends being put in the heads of the retaining screws after installing B series deadbolts. I have found a way that allows me to quickly remove the caps with a minimum of fuss and virtually no scratching of the deadbolt's finish.

I purchased a 1/8" diameter pin punch and ground the tip off at an angle. (See illustration 1.)

By doing so I achieved two things. First, the angle on a round object creates an even smaller and more pronounced tip due to the radius of the round shaft. Secondly, the flat of the cut when placed flat on the face of



**Illustration 1.**

## A Few Words From Jake...



**by Jake  
Jakubowski**

It seems that there is always someone trying to take your hard-earned money away from, you. Of course, there's the bank, the electric company, the grocery store, gas station, clothiers, Wal-Mart and the telephone company.

On the other side of the coin there are the fast-buck artists, used car salesmen, scammers, slammers, crammers and ... the telephone company!

A recent telephone bill carried a charge for \$20.59 that was billed to my telephone by a company called Integretel, on behalf of a company called Smart Internet Services of Cleveland, Ohio.

I had never heard of either company and immediately called Sprint to find out who was billing me, why they were billing me and what they were billing me for, since I already had an ISP and had not requested a new one or inquired about any further internet services. Not only that, but I had definitely not agreed to have my phone charged \$20.59 a month for the service!

Sprint was less than helpful. All they could tell me was that Integretel was a third party billing service and that I had to talk to them about the charges in question! According to Sprint, it's perfectly legal for a company to bill goods or services to your phone and Sprint has to pass the billing on to you - even if you didn't order those goods or services!

It took me two days to get to a real, live person at Integretel who was more helpful than the folks at Sprint. In the meantime, I found that I was billed for the last six months for these Internet services! I got Integretel to rescind the charges and issue me a credit when I told them that the number they were billing the service to was a customer convenience line on which I could only receive calls and not make them! So why, in the name of common sense, would I order Internet services for a phone line that would not accept outgoing traffic?

It took me even longer to get a live person at Smart Internet Services, Inc. There the person asked why I had not complained about the billing earlier. I said because I had not caught the charge earlier. Then I asked her why, if I had ordered the service, it was for a one-way (incoming only) phone line and if I had ordered the service, why they had never sent me a screen name or pass word? She hung up on me.

At any rate, the proper credit is coming (I hope) and the matter will be resolved. But just think how many businesses might be getting billed each month for goods or services they never ordered or received. Your business could be one of them.

Check your phone bill for unauthorized charges and if you should find any, complain to your local phone company, the billing company and the company that is supposedly providing you a service.

the lock, provides a fulcrum at the rear of the flat to facilitate prying to remove the pins.

By gently tapping the punch under one edge and prying outward on one side of the cap and then repeating the procedure about 90° away from the first position, will usually suffice to remove these stubborn caps.

*David Bastuk  
Arizona*



**STRATTEC WINNER:  
Schlage Lever Fix**

A customer was having problems locking and unlocking

their leverset. I put the key in the lock and the cylinder was loose in the handle. I removed the handle and noticed that the black plastic cylinder retainer — which stabilizes the cylinder — was missing. This allowed the cylinder to move deeper into the lever cavity and prevent the key from entering the cylinder properly.

Not having the needed part on the truck, I began looking for a solution to this problem that would not entail a trip back to the shop. Looking at the cap on my Bic ball point pen, I thought I could modify it to substitute for the missing retainer. I used my pocket



knife to fashion a new cylinder retainer from the hollow Bic cap. It took a few minutes to get it right, but after trimming the cap the same length and roughly the same dimensions of the original retainer, I had the lock back in service with no movement of the cylinder to interfere with the lock's operation.

*Charley Ward  
New York*



**HPC WINNER:**  
**Picking a VW High-Security Lock**

A 1998 VW Beetle with high security locks was brought to me to make keys for. After removing one screw on the passenger door edge, the handle came right off. There was a number stamped on the lock housing, but it wasn't a code. So, I began disassembling the lock to make a key.

After removing the clip, tailpiece, and the spring, the plug still wouldn't come out of the lock housing. The plug had to be turned before it would come out. Since I didn't have a key, I came up with this idea to get the plug out.

While holding the lock in my hand, I put pressure on the end of the plug with my thumb. Then using my depth keys I ran the number one depth key in and out of the lock. As the number one tumblers picked, the plug slid out slightly.

I continued with the second and successive depth keys until I completely removed the plug from the cylinder. I have also used miscut keys to run in and out of the key plug to get it to pick. Once the plug was out, I saw the tumblers were numbered. After that, it was just a matter of using my space and depth keys to cut a functional key to code.

*Marc Grizzard  
South Carolina*



**SARGENT & GREENLEAF WINNER:**  
**Shim Trick and Fishing Hooks**

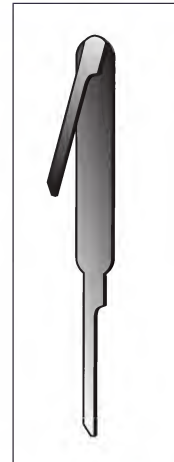
I needed a Wieser shim on a job the other day and found out I had misplaced mine. Earlier in the day I had picked up some ARCO paper binders for file folders and was able to fashion a workable shim out of one of them.

I used my Dremel tool to grind down one of the tabs until it resembles that seen in *illustration 2*. Then I folded the other tab into the base and that became the shim's handle.

It worked great on the two cylinders that I had to shim. I'm not sure how it will work on a brand-new cylinder, but I don't see why it wouldn't.

The other tool that I made consists of two small fish hooks. (See *illustration 3*.) This tool is a great key extractor and aids in pulling broken or jammed springs out of lock cylinders.

Use a small wooden dowel and drill a hole in each end to accept the shank of a modified fish hook. Heat and form the shank of the hook to your requirements, cut off the eye of the



**Illustration 2.**



**Illustration 3.**

# Modern Safe Opening



This book is a step-by-step How-To course in safe penetration. Opening safes is one of the most profitable aspects of the locksmithing business.

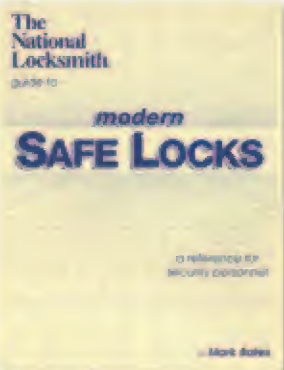
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#MSO - 1



## Modern Safe Locks

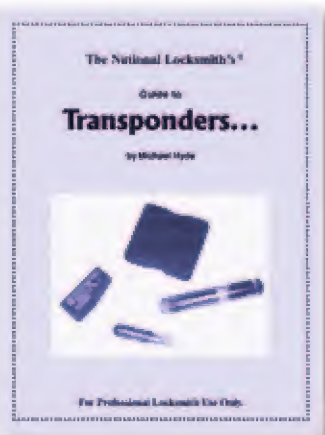


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#MSL - 1

## Transponders



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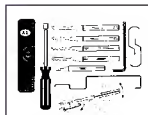
#TS - 2001

hook and force it into the dowel. A little epoxy helps secure it.

Place the hooks at opposing positions (180° apart) so you don't jam one of the hooks in the palm of your hand while using the tool.

I use two hooks because one is smaller than the other is and the two sizes offer greater usage.

*Rod Springfield  
Texas*



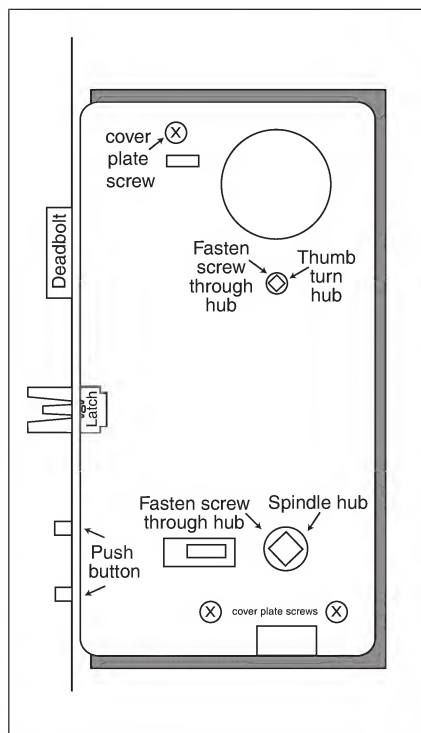
**A-1 SECURITY  
PRODUCTS WINNER:  
Baldwin 6021  
Service Trick**

Many of us have found out the hard way that when you remove the case cover from a Baldwin 6021, you can if you're not careful, watch spring-loaded parts go flying across the workbench. This can be a very frustrating ordeal, especially for the novice.

Here's a trick that prevents parts from flying out of the case and is simple, quick and easy.

Cut a block of wood (something at least 3/4" thick) approximately the size of the lock case. Place the mortise lock flat on the block and fasten it to the block with one screw through the thumb turn spindle and the other through the spindle hub. (See illustration 4.)

Now remove the screws that secure the cover to the lock case and



**Illustration 4.**

carefully remove the cover. With the lock case securely fastened to the block of wood, there is no sudden shifting of the lock case and no parts flying through the air.

The only parts that might move out of alignment are the two push buttons and a ball bearing.

With the cover off the lock case, all parts can be inspected and/or replaced as necessary.

*John Marske  
California*



**ILCO KEY BLANKS  
WINNER:  
Tool Storage Tip**

Here's what I think is a slick way to store troublesome tools, such as extra long Slim Jim's or two and three piece rods used to reach inside cars to pull handles or locks. This storage tube is handy for other hand made tools that just don't fit into your opening kit, and constantly slip and slide around in the back of your service vehicle.

I fabricated a storage device from a 16" length of 2" PVC pipe, one 2" PVC cap, one 2" PVC coupler, and two 3" U-bolts. (See photograph 1..)



**Photograph 1.**

Simply glue the cap to one end of the 16" section, glue the coupler to the other end, and mount the storage cylinder in the back of your vehicle with the U-bolts, as shown in the picture.

Your tools are stored neat, orderly and easy to access.

*Sam Cain  
North Carolina*





**KEEDEX WINNER:  
Profile Lock Fix**

I recently tried a Technitip that was submitted in The National Locksmith regarding the rekeying of profile cylinders. Unfortunately, when doing so I failed to hold the plug in when removing the spring steel retainer and the plug came out, dropping the top pins and springs. The problem I had now was how to get the top pins back in the cylinder. This is how I did it:

I used a plug from a Weiser key-in-knob and cut the end off behind the fifth pin to bypass the locking lug. Then I drilled the five pin chambers all the way through the cylinder. On the bottom of the plug I cut a kerf the length of the plug just through the two wards. I then de-burred and removed filings as required. I placed the modified plug in a plug holder and loaded the top pins, making sure the pins are all at the bottom of the plug. I turned the plug 90° to keep the pins from falling out and then removed it from the plug holder.

I inserted the plug along with the top pins in the lock cylinder. The springs were all below the surface of each chamber so they were not a problem. I turned the plug so the bottom of the plug was at the top of the cylinder. Using a flat pick, I pushed the top pins into the chambers in the bible. After loading, I used the pick to turn the plug slightly after all the pins were in place. I inserted one leg of the U-shaped spring-steel clip in the bottom groove of the plug and turned it so the spring steel is covering the top pins in the bible. At this time the other leg of the U-shaped clip should be against the top of the cylinder. I held this leg of the clip in position (you could tape it in place) and removed the empty Weiser plug.

I turned the Profile cylinder with the bible down, and inserted the recombined plug in the cylinder, making sure the locking lug is positioned correctly before fully inserting the plug.

Next I simply turned the plug to the locked position and removed the clip, inserted the key and tested the action of the cylinder.

*Kenneth Novey, CRL  
Iowa*



**TECH TRAIN  
TRAINING VIDEO  
WINNER:  
WD40 Spray  
Extension Fix**

About twenty-five years ago, I found a way to keep the red spray tube on a can of WD-40 handy and accessible whenever I needed it.

I would take a soda straw, fold about 1/2" of one end back against the straw (this acts as a stop) and then cut the straw about half an inch shorter than the spray tube on the can. Next I would tape the straw to the can.

This way the spray extension tube is always available when I need it. Simple, huh?

*Charles Barnett  
California*



**SIEVEKING  
PRODUCTS GM E-Z  
WHEEL PULLER  
WINNER:  
Quick Volvo 740 GL  
Key**

I had to generate a key for a 1985 Volvo 740 GL and found out very quickly that trying to remove the ignition or door lock was not the best way to go about it. What I did was removed the glove box lock (which contains all the wafers) and generated my key from that lock.

I took the screws out that held the assembly in place and drilled a small hole next to the retaining pin that held the plug the cylinder. Then I pried out the pin. That allowed me to pull the plug out of the cylinder, insert an uncut blank and decode the cuts.

The entire process took about 15 minutes.

*Lynn Chambers  
Louisiana*

**MAJOR MANUFACTURING  
PRODUCTS WINNER:**



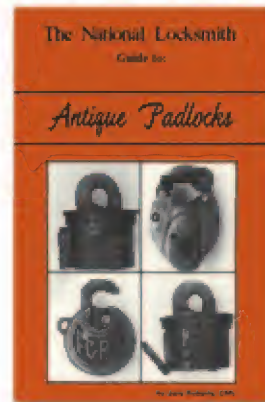
**Magnetic Tip  
Stop**

My duplicator does not have a tip stop gauge, so in the past I've always hunted around for some flat metal or plastic to gauge tip stop keys. I solved my problem with two magnets.

Now when I have a tip stop key to duplicate, I put one magnet on the guide key side of the duplicator's jaws and the other on the copy side of the jaws. It works great.

*Pat Krause  
Arizona*

## Antique Padlocks



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#PAD - 1

## IC Cores: Small Format



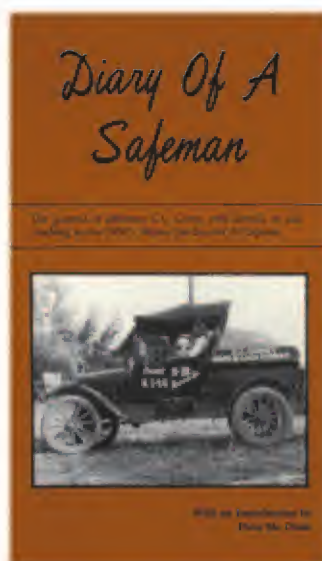
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#ICSF - 1



## Diary Of A Safeman



This book is a real gem...the private safe diary of old time safecracker C.L. Corey.

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#DIARY



### SLIDELOCK'S "Z" TOOL OPENING SET WINNER: **Key Counter Trick**

Here's a tip that I have found to help save me time and add to my bottom line.

I don't know how many times I've been in the middle of a rekey or master key job and the customer comes out and changes the number of keys they want. First it's ten, then a few minutes later it's twelve and a little later it's twenty-two!

Rather than keep changing the number on a pad, I use a Tally Counter next to my key machine. When the customer says they want ten keys, I key in ten. Then when they want five more, I just add the five to the total.

I bought my Dixon Tally Counter at Office Depot for \$8.99 and it's paid for itself ten times over as far as eliminating non-counted cylinders or keys.

*Ron J Schommer  
California*



### 1995 THE SIEVEKING AUTO KEY GUIDE WINNER: **Blazer Tail Gate Lock Fix**

On the Chevy Blazers with the "T" handle that unlocks the rear window and tailgate, the retainer cap will sometimes come loose preventing the key from operating the lock and unlocking the window or the tailgate.

Drilling the lock and replacing it is one remedy. However, I think I have a better solution.

From inside the vehicle, the trim panel that hides the lock assembly and mechanism can be gently pried back (at the top) far enough to expose the locking mechanism. This allows you to put a screwdriver or other tool in the cavity to manipulate the window/tailgate mechanism and unlock it.

Once you have the tailgate open, you can remove the panel, remove and repair the cylinder or do whatever other service you deem necessary.

*Mike Hudson  
Washington*



### JET KEY BLANKS WINNER: **Opening the Master 40 Padlock**

To open a Master 40 padlock, drill a 1/8" hole, 1/4" above the "N" in No 40. All you have to do is piercing the

case. Insert a hooked tool in the hole with the hook pointing downward.

Lift up on the handle of the hooked tool bringing the hook against the face of the lock case. Now rotate the hook against the inside of the lock case in a counter-clockwise direction.

This will allow you to trip the mechanism and open the shackle.

*William T. Allgood  
South Carolina*

### HIGH TECH TOOLS WINNER:



### **Easier UL Rated Tubular Lock Drilling**

Occasionally, I find it necessary to drill open a UL listed tubular cam lock such as those found on some older coin-operated laundry equipment. These locks are easily identified by the UL logo on the face of the lock and have a slightly larger diameter keyway than a standard 137 tubular lock.

The outer portion of these locks is fairly hard. Before you dull your tubular lock saw, or a drill bit, take a heavy-duty grinder and grind the face of the lock down as far as its mounting in the laundry equipment will allow.

Once you get through the outer portion of the hardened material (remember it is case hardened) the metal is softer and will drill much like a standard tubular lock.

This trick has saved me a lot of wear and tear on my equipment and patience.

*Bill Cochran, CRL  
Wisconsin*



### LAGARD WINNER: **One More Titan Trick**

I have read numerous tips for removing Titan cylinders from Titan hardware. Here's the quickest way I have found to do it when a removal key or operating key is not available.

Pick the knob cylinder counter-clockwise to the 9 o'clock position. In this position the plug retainer will fall into the slot in the bottom of the plug since there is no key in the lock to stop it from moving inward.

Now simply wiggle the plug from side-to-side with your pick or another tool and it will fall out into your hand and you can service as needed without removing the lock from the door.

Titan deadbolts can be serviced the same way. The only difference is, the plug has to be turned to about the 8 o'clock position.

*Bill Reeves, CML  
Arizona*





# Road Rally

A showcase of locksmith service vehicles.

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The National Locksmith, Road Rally, 1533 Burgundy Parkway, Streamwood, Illinois 60107-1861.

**Owner:** Jeff Miller,  
Moriarty, NM

**Model:** 1994 Ford  
E150 Cargo Van



**Owner:** Vic Toonen,  
Cooroy, Queensland,  
Australia

**Model:** 1950 Austin  
A40 Countryman





# 1999 Honda CBR600F4



by  
John Blankenship

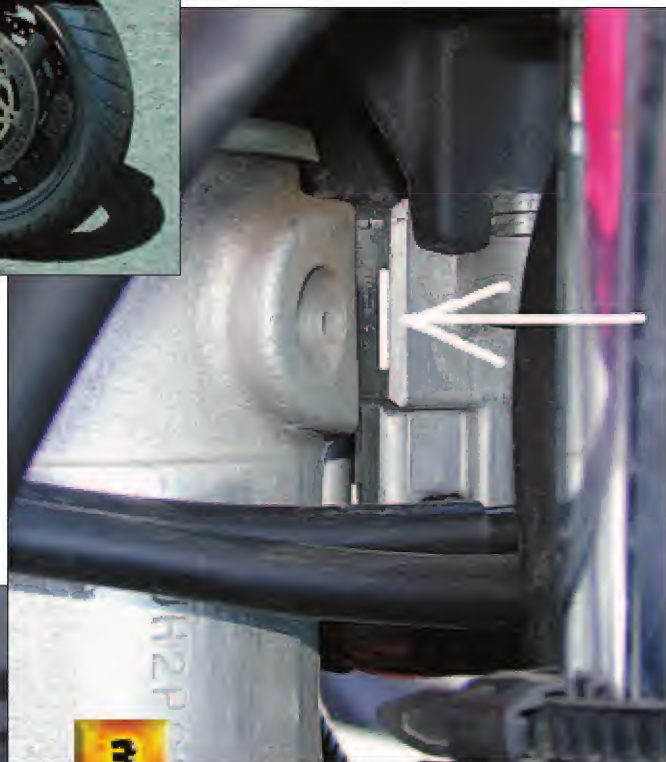
**1**

The 1999 CBR600F4 won the AMA 600 Supersport Championship last year and is a very popular motorcycle. It uses the new code series that the 1997+ CBR900RR & CBR929RR models use. The X265 key blank is used for this new code series. This motorcycle was purchased used without keys so the owner bought a new lockset. He installed the ignition lock, but was unable to unlock the gas cap to remove it, so I picked the gas cap and removed it for him. I also talked him into letting me do a photo article on his bike.



**2**

The ignition/steering lock is located between the instrument panel and handlebars. It is shown in the "OFF" position and it is necessary to push the plug in to lock the steering. The handlebars have to be turned to the far left or right to align the locking bolt with the hole in the frame before the steering will lock. This is the only lock on the bike that has a code on it. The code is stamped on this lock right next to the steering lock bolt.



**3**

Warren Discon of Custom Lock & Key in Marietta, Georgia deserves credit for coming up with an excellent method for originating a key to these motorcycles and posting it on an automotive locksmithing forum. Turn the steering all the way to the left and look at the ignition lock from the right side of the motorcycle. The code is visible on the back of the lock housing, but it is so small that you cannot read it. In the photo it is underlined with an arrow pointing to it. The hole in the frame just to the left of the code is for the steering lock bolt to extend into when the steering is locked to the right. It is a good reference point for locating the code. You can see the code even if the steering is locked to the left. The steering is locked to the left most of the time because that is the side the kickstand is on so the bike balances better in that position. If the steering is locked to the right it is time to try another method.

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4

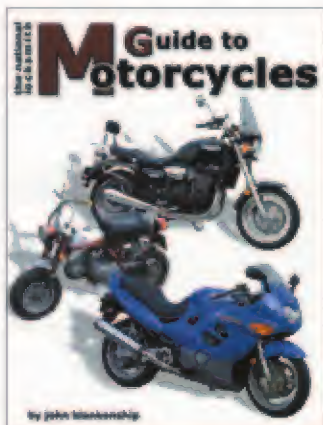
A close-up view of the code reveals it better, but it is very difficult to read. You need to tilt your head to the left and read from bottom to top. The digits are 8XCS18. The last 3 digits are the code so the code is S18.



5

Warren discovered that you can use an otoscope to read the code. When you place the otoscope close to the code you are unable to get your eye next to the lens to see in the usual fashion due to obstructions. You will need to adjust the distance from your eye to the lens until it is focused. I found that when my eye was about 12 inches from the lens I could see one digit at a time. It is helpful to place a car opening light on the left side of the lock between the lock and frame. The light casts a shadow into the stamped digits and helps you see them. Using this method I was able to narrow the code down to S18 or S78. Keep in mind that the first digit of the code is a letter and is J, K, L, M, N, P, Q, R, S, T, or U. The 2nd and 3rd digits are numbers and are 00 to 99, except for U which only uses numbers 00 to 39.

## Guide to Motorcycles



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#MOT - 2

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#AE - CD





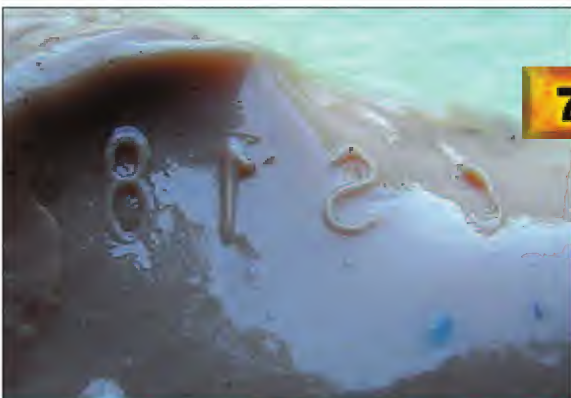
**6**

Locksmith Jaques Plousos of Chomeday Laval, Quebec suggested using Silly Putty to read the code. I flattened one end of the putty by pressing it inside the pages of a notepad. I slid the flattened end between the lock housing and frame. I then used a large screwdriver to push the putty against the code that is stamped into the lock housing. I used the screwdriver to pull the putty away from the lock housing and then pulled the putty out.



**8**

You can disassemble the gas cap to obtain 5 of the 8 cuts that are in the ignition lock. Begin by picking the lock 90 degrees clockwise as shown. This lock is usually easy to pick with a rake.



**7**

It was not easy, but on the fifth try I obtained a good impression of the code. It appears as if you are looking at it in a mirror, but S18 can easily be read. If you are unable to read the code there are other ways to make the key. Options are reading, impressioning, or disassembling a lock. Reading is a good option because there are only 3 depths and the #2 wafers are silver in color. The #1 & #3 wafers are bronze in color and are easily distinguished because the #1 wafer extends only slightly into the keyway while the #3 wafer extends far into the keyway.



**9**

Stuff a rag into the filler neck to insure that the bolts or anything else does not drop into the gas tank. Use a 5mm hex wrench to remove the 3 bolts that are missing in the photo. The other 4 bolts do not have to be removed.



**10**

The gas cap assembly is shown removed from the motorcycle. The two locking bolts are retracted in the unlocked position. The way to lock the cap so a key can be removed is to push in on both sides of the gasket at the same time. This simulates pushing the gas cap down into the filler neck, which is the way it is normally locked. If you picked the lock it is best to leave the bolts retracted.



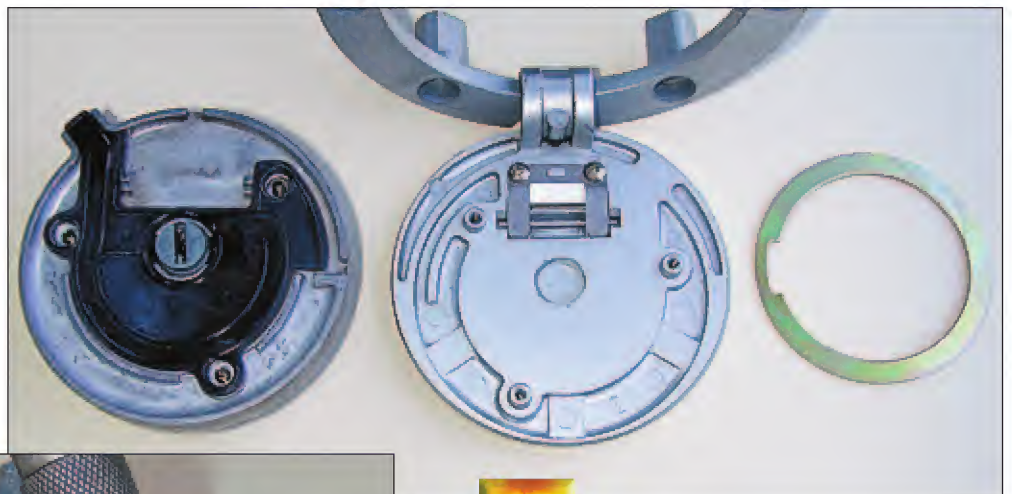


**11** There are two methods to disassemble the gas cap.

The first method is to remove the gasket backing ring using two small screwdrivers as shown in the photograph. It is similar to removing a bicycle tire from its rim. It is difficult to replace the ring behind the gasket during reassembly, but it can be done. There is a cutout on the inside of the backing ring that is visible in the photograph at the 4 o'clock position. The purpose of this cutout is to allow the ring to slide over the locking bolt if the bolt is extended in the locked position.

After the gasket backing ring has been removed, pry up the gasket and look for the three small Phillips screws that are hidden under it. Unfasten the screws and leave them; the gasket will hold them in place. Now the lock assembly can be removed from the cover plate.

**12**



**13**

The gasket backing ring was removed and placed on the right. Then the lock assembly was removed from the cover plate, turned over, and placed on the left. The three screws are still being held in place by the gasket. The plug can now be pulled out the front of its housing.



**14**

The second method to disassemble the gas cap is as follows. The gas cap housing is crimped at 16 points around its edge to secure the gasket retaining ring in the housing. Use a spring-loaded center punch to punch out each crimp so the retaining ring can be removed.

Screw a small sheet metal screw into the channel in the retaining ring. Then use a pair of side cutters to grab the screw and pull the retaining ring out of the housing as shown.

**15**



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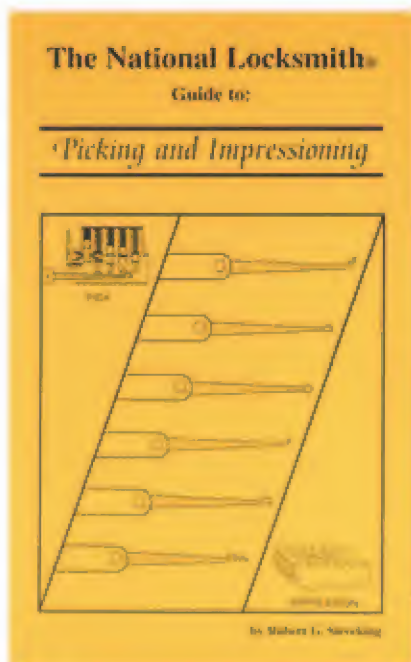


**16**

After the retaining ring is removed, the gasket and then the gasket backing ring are easily removed. Now you can see the three small Phillips screws that have to be removed.

Remove the three screws and the lock assembly from the cover plate. The plug is now free to be pulled out the front of the housing.

**17**



## Picking & Impressioning

Here is the most complete book ever published on picking and impressioning locks! You will have everything you need to know about how to open almost every kind of lock that can be picked.

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#PI





**18**

The plug has been pulled from the housing while in the unlocked position. It is best to remove the plug while it is in the unlocked position because the locking bolts are retracted and will stay in position. If you remove the plug while in the locked position they will spring out slightly and the plug is difficult to put back in. The best thing to do in that case is to squeeze the locking bolts in with your fingers until they click into the unlocked position.



**19**

The gas cap contains 5 wafer tumblers all on one side in spaces 4 through 8. A blank inserted into the plug shows the cuts are 21313. Now we need to determine the cuts in spaces 1 through 3 to originate a key that will operate all the locks on the motorcycle. The options are:

- Use key code software: A search revealed there are only six codes that contain cuts 21313 in the last five spaces and that only two blanks are needed to progress all six codes. First key; 112, 113, 123. Second key; 121, 131, 132. The first three cuts turned out to be 132 so a software search of cuts 13221313 revealed the code as S96. Remember, this is the gas cap I removed and it goes with the ignition lock the customer removed, not the ignition lock on the motorcycle with code S18.
- Progression: The new code series has only 3 depths, the first space is always a #1 cut, and there are never 3 spaces in a row with the same cuts. Therefore there are only 8 possible combinations. 1st key: 112, 113, 123, 133. 2nd key: 121, 131, 132. 3rd key: 122. Since space 4 is a #2 depth you can eliminate the possibility that spaces 2 and 3 are

depths of 22 thereby reducing the possible combinations to 7. If spaces 4 and 5 had the same depth cuts then you could eliminate that depth as a possibility in space 3.

- Read the first three cuts in the ignition lock.
- impression the first three cuts in the ignition lock.



**20**

The wafers from left to right are depths 21313.

The #2 depth wafer is silver in color and is an aid in reading the lock through the keyway. This lock uses the ASP A-19-101 keying kit, which is also used on Honda automobile door and trunk locks throughout the 80's.

If you used the second method to disassemble the gas cap you will need to use a screwdriver in the channel of the retaining ring to push it down and compress the edge of the gasket. Use a spring-loaded center punch to recrimp the edge of the housing over the retaining ring. Reposition the screwdriver and punch to recrimp each of the 16 crimping points in turn.

**21**



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This motorcycle had a custom rear fender so the seat lock was missing and I was unable to include it in this article. The photograph shows the seat lock on a new CBR600F4 sitting on the showroom floor. It is located on the back of the motorcycle under the taillight. I looked at the Honda parts department computer screen and the lock is held on by an automotive style U-clip. It appears you have to pick the lock and remove the seat to gain access to it. I have heard that the lock contains 5 wafer tumblers in spaces 4 through 8 and there is no code on the lock.

The owner removed the old ignition/steering lock and installed this new one. He said it was secured by two tamper resistant Torx bolts. Remove the bolts and the lock can be pulled down for removal.

## Locksmith Dispatcher 2000

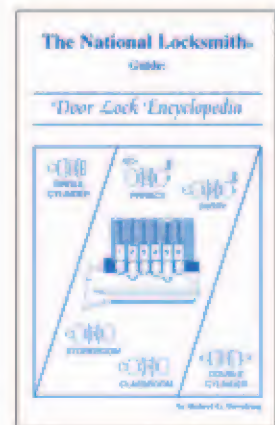


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#DIS - 2000

## Door Lock Encyclopedia



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#DLE





**24**

The code is stamped next to the steering lock bolt. The digits on this lock that the customer removed is 9BDS96 so the code is S96.



**26**

Remove the two Phillips screws to disassemble the lock.

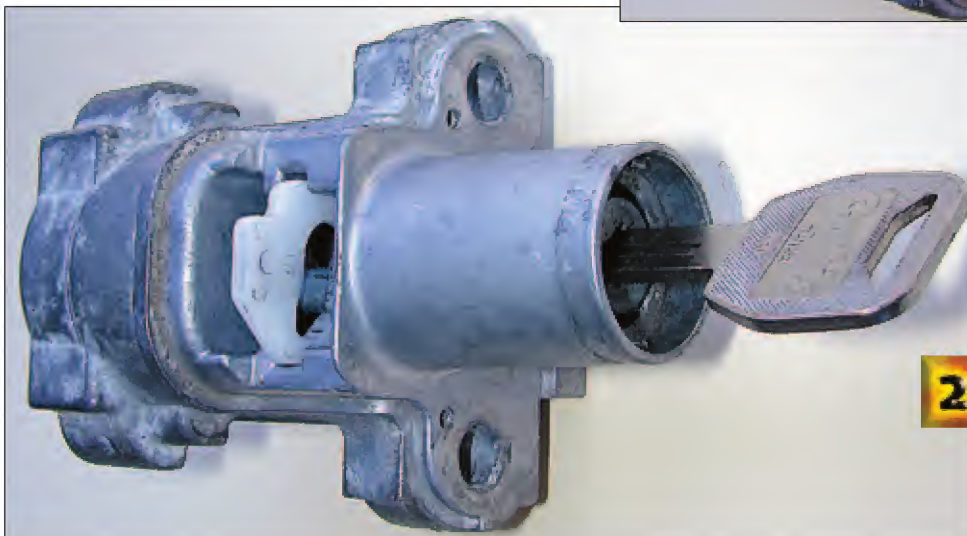
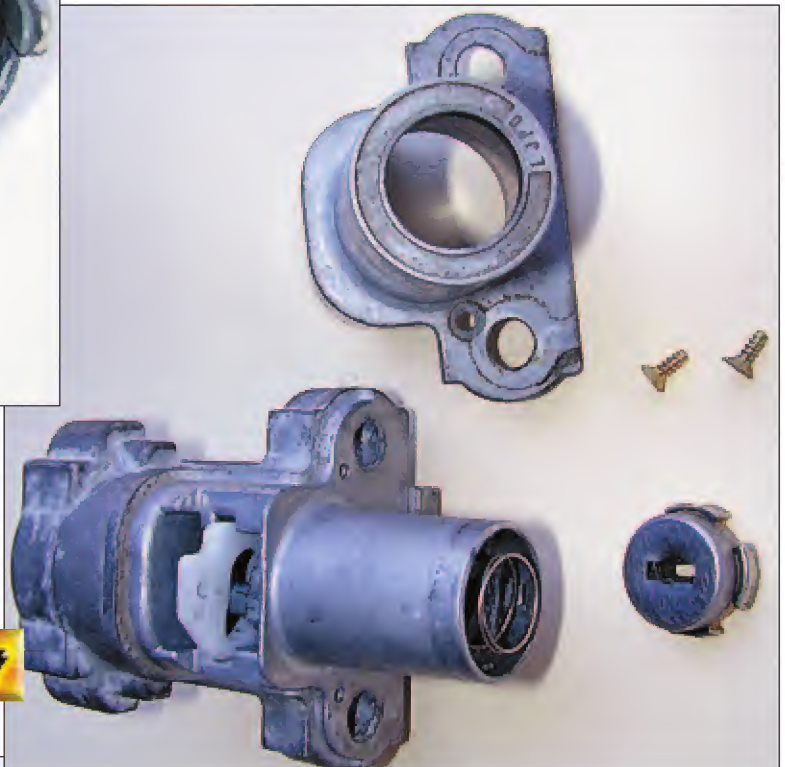


**25**

The switch has been removed from the back of the lock. Four small tamper resistant Torx screws secured it. A spring fits into the cup around the tailpiece to maintain forward tension on the plug.

Remove the cover, hardened face piece, and the spring behind it. The face piece is designed to be pushed in during a screwdriver attack. It will then interlock with the inside of the cylinder to prevent it from turning.

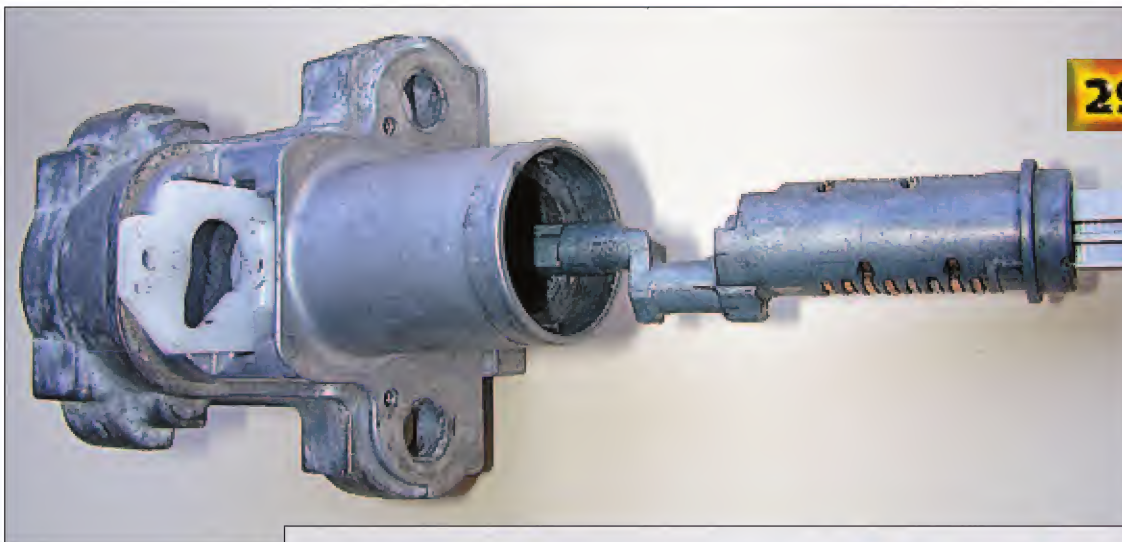
**27**



**28**

The plug has to be in the OFF position before it will slide out. The offset tailpiece aligns with the slot in the steering lock bolt activator and the groove in the cylinder. You do not need the key to slide it out if it is in the OFF position.





29

The plug has been removed from the cylinder.

The ignition lock contains all 8 wafer tumblers staggered in pairs.

30



31

The wafers from left to right are depths 13221313. Notice that the #2 depth wafers are silver in color. I am unable to locate a keying kit for this ignition.

A Curtis HD109 blank has been code cut to depths of 13221313 and will operate the ignition, gas cap, and also the seat lock if it had one. This code series shares the spacing, depths, card number, and ITL number with 82-95 Honda and Acura automobiles using the 3001-4481 code series.

32



**The locks are available at Honda motorcycle dealers:**

**Lock Set:** Part Number HP 35010-MBW-670  
Price \$146.56

**Ignition/Steering:** Part Number HP 35100-MBW-672  
Price \$99.65

**Gas Cap:** Part Number HP 17620-MAS-E01  
Price \$112.22

**Seat:** Part Number HP 77234-MBL-611  
Price \$20.06

**Codes:** J,K,L,M,N,P,Q,R,S,T00-99, U00-U39

**Blank:** Ilco X265 (HD109), Curtis HD109, Silca HON63FP

**Spacing:** 1=.098, 2=.197, 3=.295, 4=.394, 5=.492, 6=.591, 7=.689, 8=.787

**Depths:** 1=.276, 2=.244, 3=.213

**Card Number:** CF73 **ITL Number:** 211

**Curtis:** HD-13 cam & HD-13A carriage

**Tumbler Locations:** 1 2 3 4 5 6 7 8

**Ignition:** x x x x x x x x

**Gas Cap:** x x x x x

**Seat:** x x x x x

TNL





# THE CASH STATION

by Mark Daniel

## Gary

**Safe Manufacturer**  
Gary Safe

**Safe Model #**  
Drop Safe

**Safe Size**  
19-3/4" Wide, 33-1/4" High, 19" Deep

**Door Size**  
14-1/2" Wide, 10-1/2" High

**Handle Type**  
T Handle

**Handle Location**  
8-5/8" Down from top of door, 6-3/4"  
From opening edge.

**Handle Rotation**  
Clockwise to open.

**Dial Center to Handle Center**  
4-3/4" Down on center.



**Dial Location**  
3-7/8" Down from top of door, 6-3/4" From opening  
edge.

**Number of Door Locking Bolts**  
3







## Gary

### **Door Locking Bolt Locations**

2-1/4", 5-1/4", 8-1/4" From top of door down.

**Door Locking Bolt Diameter**  
3/4"

**Door Thickness to Bolt Center**  
2-1/8"

**Door Thickness to Lock Case**  
1-1/2"

**Door Thickness to Back of Lock**  
2-5/8"

**Lock Type**  
S & G 6730

**Combination Lock Description**  
Three wheel, key-changeable lock.

**Combination Lock Case Thickness**  
1-1/8"

**Number of Wheels**  
3

**Driver Location**  
Rear

**Combination Lock Handing**  
Vertical Down

**Drop-In Location**  
73

**Forbidden Zone**  
0 - 20

**Combination Lock Opening Procedures**  
4xL to first number (add ten numbers for silent alarm).

3xR to second number

2xL to third number

1xR until dial stops.

**Combination Lock Drill Point**  
7/8" from dial center at 72. Align wheel gates at lever fence.

**Combination Lock Relock Trigger Type**  
Spring-loaded arm drops in lock bolt slot when lock cover is removed.

**Combination Lock Relock Trigger Drill Point**  
5/8" down from dial center, 15/16" right of dial center.

**External Relock Device Type**  
Spring-loaded plunger.

**External Relock Device Drill Point**  
1-3/4" Left of dial center, 2-3/4" Down.

**Safe Deposit Box Manufacturer**  
S&G



**Safe Deposit Box Model #**  
4440

**Safe Deposit Box Opening Procedures**  
Pull nose(s) and retract bolt, or drill and pick.

**Safe Deposit Box Relock Device Type**  
N/A

**Safe Deposit Box Relock Device Drill Point**  
N/A

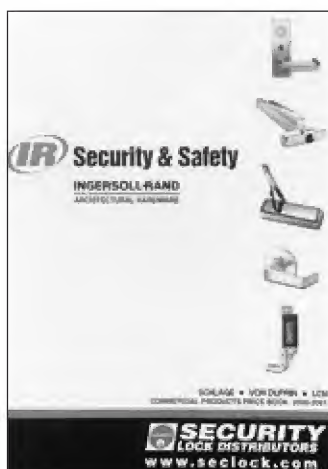


# BUSINESS BRIEFS

## Security Lock Expands Schlage Ties



Security Lock now maintains total inventory of all Schlage mechanical and electrified access hardware in each of its warehouse centers. Complete in depth inventory is maintained for all Schlage products in every architectural finish, function, design, backset, voltage, keyway and switch option. Security Lock provides single source availability for the entire Ingersoll-Rand family of companies, including Von Duprin, LCN, Glynn Johnson, Locknetics and Ives.



Complete pricing information on Schlage, Von Duprin and LCN mechanical and electrical security products is now available in a 300-page reference guide. In addition to prices, the immense book contains

product descriptions, features, functions, dimensions, options, accessories and complete ordering information.

For more information call: (800) 847-5625; Fax: (800) 878-6400; E-mail: [info@seclock.com](mailto:info@seclock.com); Web: [www.seclock.com](http://www.seclock.com).

## Akron Hardware Stock List Available

Akron Hardware's revised stock list/price list is now available. This updated product list includes new product lines (Securitron, McKinney, Folger Adam and Mas Hamilton) and pricing. This is a free publication, available by contacting the Akron Hardware sales department.

## Locknetics Electromagnetic Locks Pass Fire Test

Locknetics Security Engineering has reported that its entire line of electromagnetic locking systems meets Uniform Building Code Standard 7, Section 2 (UBC 7-2) (1997), as verified by passing Underwriters Laboratories, Inc. (UL) 10C positive pressure fire test. The passage of the fire test means that Ingersoll-Rand and Locknetics have provided what the manufacturer claims is the first electromagnetic locks that comply with the relevant Building Code. All Locknetics electromagnetic locks are BHMA rated and include a 5-year warranty.

## Aiphone Corp. Sponsors Target 2000 Home

Aiphone Corporation is a product sponsor of Champion Enterprises Target 2000 Home. This home was introduced at the International Builder's Show in Dallas earlier this year, and featured the MK Door Sentry system. The MK Door

Sentry features a compact black & white door camera with the widest viewing area of its kind. The room stations have a door release button that controls an optional electric door release allowing homeowners to answer the door from one of the inside stations. Aiphone intercom systems range from simple audio door answering systems to complex microprocessor-based commercial systems as well as products for the industrial markets.

## Medeco Announces New Appointment



Dennis Bruce

Medeco Security Locks Canada has appointed Dennis Bruce to the position of Senior Account Executive responsible for new business development and OEM sales in the province of Ontario. Dennis brings with him an extensive knowledge of the industry and a complete and in depth education from the Door and Hardware Institute.

## Sargent & Greenleaf's New Regional Sales Manager

Sargent & Greenleaf's Arm-A-Dor Division recently named Jeff Waufle as its new Regional Sales Manager. In his new position, Waufle will handle the sales and sales management of the Arm-A-Dor product, overseeing distributors and representatives, and will



Jeff Waufle

work with major retailers, supermarkets and restaurants to promote Arm-A-Dor and S&G Electronic Safe Locks.

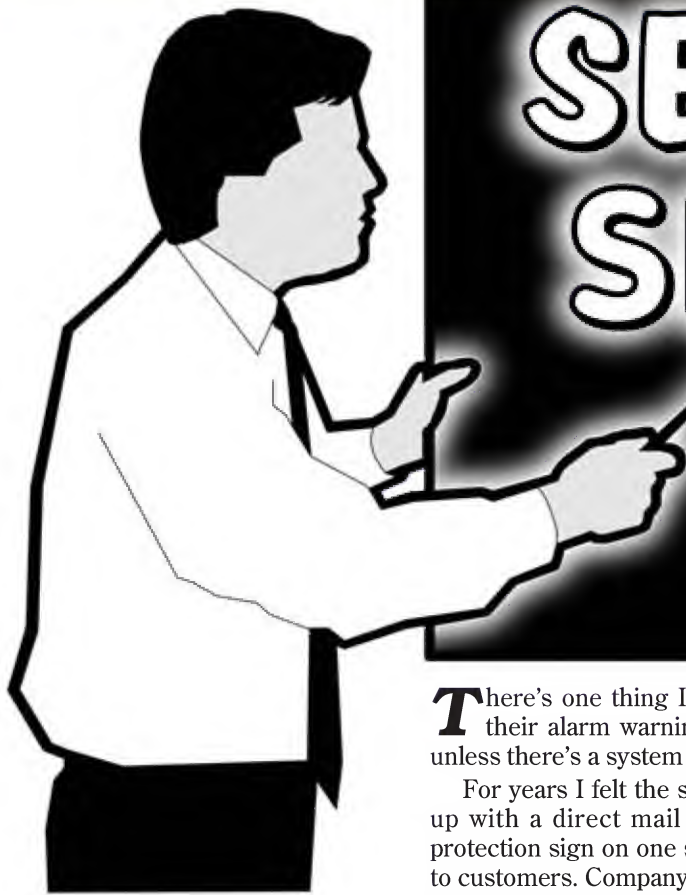
## DynaLock Corp. Appoints Sales Representatives

DynaLock Corporation has appointed C.F. Hedger Co. of Gold Canyon, Arizona, as sales representatives for contract hardware, locksmith and access security accounts in Arizona. DynaLock has also appointed Access Hardware Sales, Inc. of San Juan Capistrano, California, as sales representatives for contract hardware, locksmith and access/security accounts in So. California, So. Nevada and Hawaii.

## Ingersoll-Rand Acquire Interflex Datensysteme

Ingersoll-Rand Company, parent company of Schlage, Locknetics, and many other security and safety brands, has agreed to acquire Interflex Datensysteme GmbH, based in Stuttgart Germany. Interflex provides integrated products and services for electronic access control, time and attendance recording, personnel scheduling and industrial data management. **IRL**





# SELLING SECURITY

by Ted Tate

## Attract New Clients

There's one thing I noticed when I was in the security business; everyone protected their alarm warning signs and decals like they were gold. "Nobody get's my decal unless there's a system to back it up!" they'd shout.

For years I felt the same way. One afternoon, at a staff brainstorming session we came up with a direct mail card idea. It sounded like a winner except it would have our protection sign on one side. Everybody liked it but me. "We don't give our sign out except to customers. Company policy. Can't do it!" I said forcefully. (Sometimes it feels good to be President of a company.)

All were silent except my brother, Bob, the great equalizer in my life. He was the Vice President. "Tell me this, Ted." (I suddenly felt an invisible hammer raising over my head.) "You agreed with the rest of us that if we go ahead, chances are very good it'll make us money, right?"

"Well, yes" I agreed, feeling the hammer raise higher. "Then" Bob said, "how much money will we make by hoarding our decal design and not doing this?" Bam!

Needless to say, we proceeded. We took the artwork from our protection sign to a local printer. He reproduced it on one side of a post card except where it said "WARNING, PROTECTED BY" we took off the words "protected by."

They printed a black line down the flip side and dividing the card in half. This message was on the left side: "We can't make any promises, however, you're welcome to place this postcard on your door for your own peace of mind. If you would like to back it up with one of the best alarm systems in the world, then please call us now for a free, no-obligation security survey and estimate." Below that our company name with a few of the services we provided. The right side had the words POST CARD printed, plus space for a stamp and recipients address.

We mailed these out where crime was a big factor, then followed up with a phone call or visit five days later. Because they were paper they didn't last long, but I was surprised to see a lot of them in windows.

Every so often somebody would call for a new "postcard." We'd send out a sales person to explain that we were out of cards, but we did have an excellent alarm system and a "real" protection decal to go with it.

We also got more calls from people who liked the idea of security and wanted the real thing.

The bottom line is: Did a few cheapskates get the value of our protection and good name without paying for it as long as the paper card held up? Yes they did.

Did we sell enough alarm systems to pay for the promotion and add additional reoccurring revenue to our monthly billings? You bet!

### Good luck and good selling!

*Ted Tate was in the alarm industry nearly eighteen years. He now presents in-house business training programs and is a nationally known trainer and author. For additional free selling tips visit his web site: [www.trainingexpert.com](http://www.trainingexpert.com)*





# Distributor Snapshot



## Access Hardware Supply

AHS is one of the fastest growing wholesale distributors providing a full line of the highest quality locking devices, access control and security products. Access provides and promotes a positive working environment where our employees have the desire to contribute towards our continued success and commitment to our customers. Our growth is attributed to providing comprehensive technical and application support, before and after the sale. We believe that our priorities are... 1. A genuine interest in our customers, 2. Mutual respect for our fellow co-workers, and 3. A continuing strive in providing the best overall service the industry has to offer.

## Ace Lock & Security

Ace Lock & Security has been supplying goods to the trade for 53 years. The company carries products of more than 100 manufacturers; offering in-house and field support by expert sales people who have locksmith and access control backgrounds.



## Andrew's Wholesale

544 S. 9th Street  
Lebanon, PA 17042  
Toll Free (800)544-0519  
Local Number (717)274-8733  
E-mail - Sales@andrewslock.com  
Web - www.andrewslock.com  
Owner - Richard A. Rudy

## Boyle & Chase

Boyle & Chase, architectural hardware distributor, is your source for Ingersoll-Rand's Schlage, Von Duprin, LCN, Glynn-Johnson and Locknetics products plus Arrow, Simplex, Hager/Roton, Folger Adam and decorative hardware from Baldwin and Omnia. "We stock it so you don't have to," means we work hard to carry every product and every part.



## IDN

IDN, Inc., International Distribution Network's mission is to market, sell and supply hardware, electronic systems and services to locksmiths throughout North America, at the best value for the price. With 39 stocking warehouses, we offer same-day pick up or next day delivery to most of our customers. Inventories in each location are tailored to meet the unique needs of the local markets we serve.



## Dugmore & Duncan, Inc.

Dugmore & Duncan Inc. is proud to be the largest stocking distributor of SARGENT door hardware. The inventory includes locksets, openers, closers, exits and all the parts. The philosophy at D&D is to continue to be a supplier that the industry can rely on and to remain attuned to its evolving needs.

30 Pond Park Road  
Hingham, MA 02043  
Toll Free Phone Number:  
(888)384-6673  
Local Phone Number:  
(781)740-1101 Ext. 1112  
E-mail Address: Marge@Dugmore.com  
Web Address: www.dugmore.com  
Locksmith Contact: Ed Minishak,  
Director of Marketing & Sales



## Turn 10 Wholesale



Turn 10 Wholesale is a family owned & operated distributor that has been dedicated to serving locksmiths with Fire, Burglar and Data Safes for over 28 years. Turn 10 became America's largest safe distributor by listening to and serving the locksmith's needs. Locksmiths count on Turn 10 for quick shipping (in 24 hours) free freight (orders above 250 lbs.) and helpful customer service on all 7 safe brands. Amsec, Chubb, Gardall, Hayman, Melink, Victor and Winchester.

## Security Lock Distributors

Cornerstones of Security's operation are product knowledge, extraordinarily large inventory that guarantees immediate delivery, staying abreast of market trends, offering technical advice to customers and being able to modify, adjust or convert products to meet specific requirements. Security's fundamental goal is to be there with what is needed. The right product at the right time, every time.

Security Lock Distributors can be contacted at:

40 "A" Street, Needham Heights,  
MA 02494  
Toll Free: 800-847-5625  
Phone: 781-444-1155  
E-mail: [infor@seclock.com](mailto:infor@seclock.com)  
Web: [www.seclock.com](http://www.seclock.com)


## McDonald Dash Locksmith Supply, Inc.



**LOCKSMITH SUPPLY, INC.**  
P.O. Box 752506  
MEMPHIS, TN 38175-2506  
SERVING SECURITY SPECIALISTS SINCE 1945

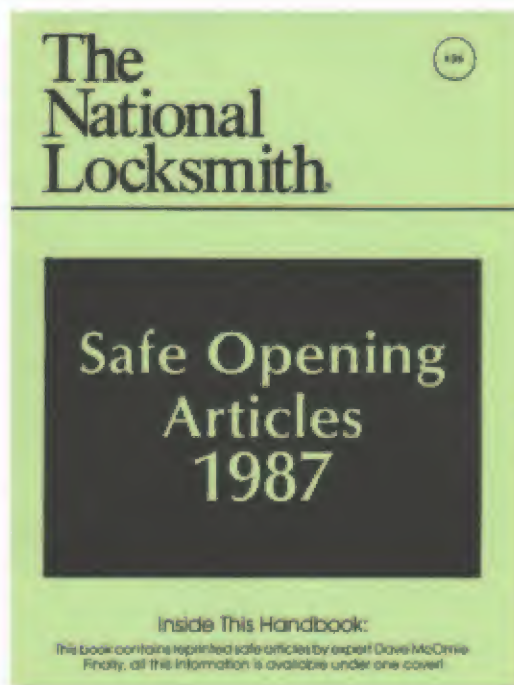
**CALL TOLL FREE**  
NATIONWIDE:  
1-800-238-7541  
LOCAL:  
1-901-797-8000  
FAX:  
1-901-366-0005

**SHDA**  
Security Hardware Distributors Association



First class service is our top priority. Setting the pace for the new millennium, we have our new 2000 edition catalog available now. We are also scheduling the continuing education classes that have proven to be an asset to us all. Now all we need is you. Call us at (800)238-7541 or visit our web site at [www.mcdonaldldash.com](http://www.mcdonaldldash.com). **TNL**

# Safe Opening Articles 1987



Now under one cover—all the information safe opening articles by expert safeman, Dave McOmie.

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#SA - 1



# VIN'S AND AIR BAGS THE MITCHELL® WAY

by Richard Allen Dickey

**H**ave you ever wondered how to interpret an automotive vehicle identification number (VIN)? How about this one... Did your customers air bag work before you removed it from the steering wheel? Did you reinstall the air bag properly and run the onboard diagnostics? Mitchell®, the premiere provider of automotive information for over 50 years has exactly what you need.

Information is a powerful tool, but often the problem is finding the information you need when you need it. I can tell you how to interpret the

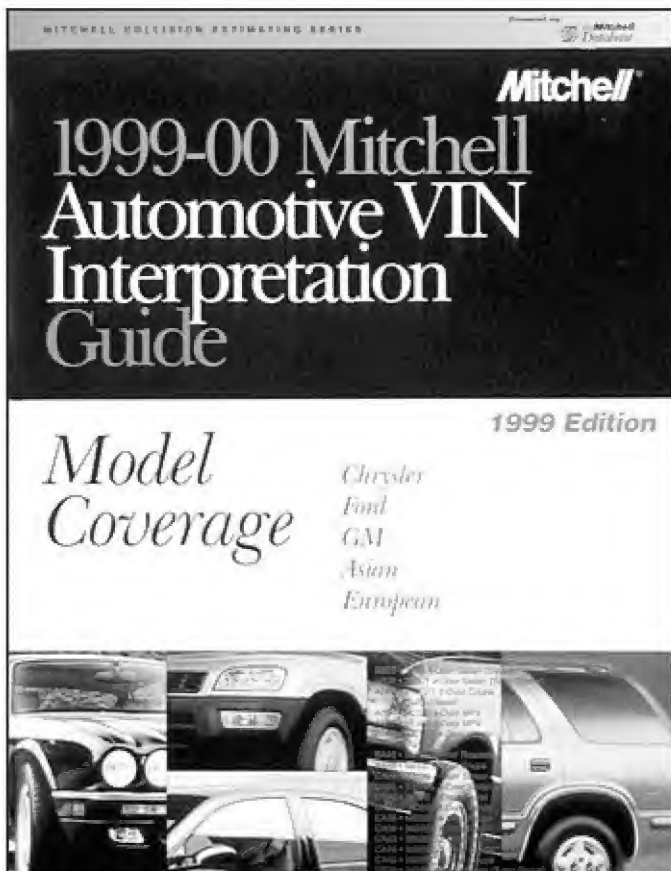
VIN on my 1995 Ford Econoline because I have the service manual. My 1994 Dodge Ram is a different story. I can't begin to tell you how to properly test the air bag in every car on the road today. I'm just happy when I get the thing off the steering wheel.

I stumbled over a couple of books that have simplified VIN numbers and air bags to such a degree that I have to tell you about them. They are the Mitchell Automotive VIN Interpretation Guide (*see photograph 1*) and the Mitchell Air Bag Quick Reference Guide (*See photograph 2*).

Let me tell you a little about the VIN interpretation guide.

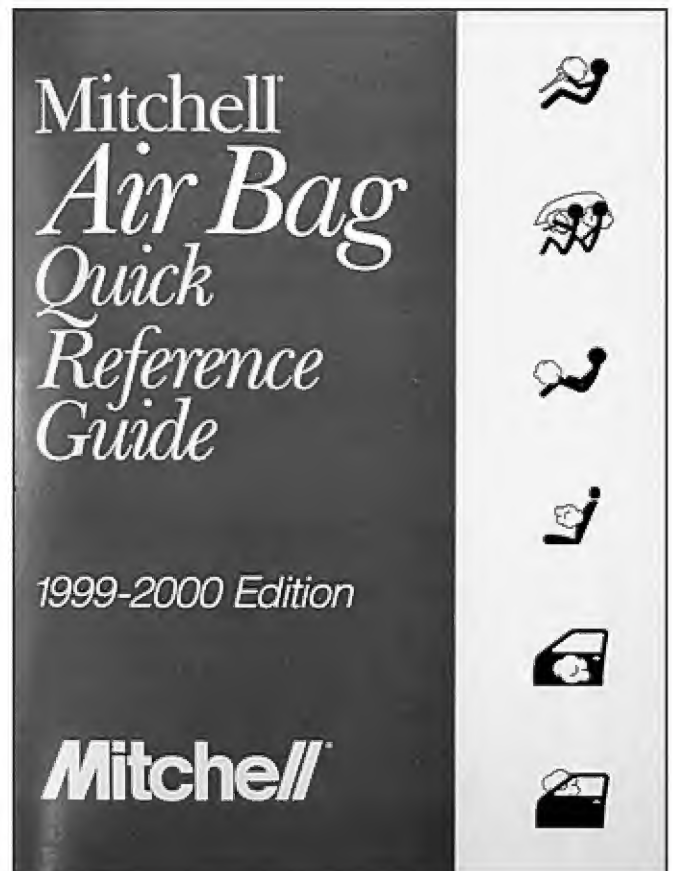
There is a lot of information within a VIN. For instance, you can tell if the vehicle was made in the USA, Canada, Japan, etc. You can determine the make, model, restraint system, body type and on and on. With all of the lock changes that are made from year to year, having a VIN number can be a great help.

The Mitchell Automotive VIN Interpretation guide has been put together with the locksmith in mind. It is just under 50 pages long and broken



1. The Mitchell VIN Interpretation Guide.

150 • Visit [www.TheNationalLocksmith.com](http://www.TheNationalLocksmith.com)



2. The Mitchell Air Bag Quick Reference Guide.





3. VIN located in doorway of Dodge Ram.

<b>Chrysler Motors Trucks</b> <b>1C3BC41G9FK100009</b> <small>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17</small>			
<b>Country Of Origin</b> 1 • U.S. 2 • Canada 3 • Mexico J • Japan	<b>3 Type of Vehicle</b> 4 • Multi-Purpose Vehicle 7 • Truck <b>4 GVWR</b> D • 1-3000 lbs. GVW E • 3001-4000 lbs. GVW F • 4001-5000 lbs. GVW G • 5001-6000 lbs. GVW H • 6001-7000 lbs. GVW J • 7001-8000 lbs. GVW	<b>4 GVWR (Cont.)</b> K • 8001-9000 lbs. GVW L • 9001-10000 lbs. GVW M • 10001-14000 lbs. GVW N • 14001-16000 lbs. GVW  <b>5 Vehicle Line</b> Caravan/Voyager/Town & Country H • Caravan, Voyager (FWD - 1984-95) H • Town & Country (FWD - 1992-95)	

4. VIN information part 1.

<b>VIN INTERPRETATION</b> <b>CHRYSLER MOTORS</b> <b>Chrysler Motors Trucks (Cont.)</b>		
<b>5 Vehicle Line (Cont.)</b> Caravan/Voyager/Town & Country (Cont.) K • Caravan, Voyager (AWD - 1984-95) K • Town & Country (AWD - 1992-95) P • Caravan (FWD - 1996-99) P • Town & Country (FWD - 1996-99) P • Voyager (FWD - 1996-99) T • Caravan (AWD - 1996-99) T • Town & Country (AWD - 1996-99) T • Voyager (AWD - 1996-99) T • Town & Country (1990-91)  <b>Dakota</b> 1987 N • 4x2 R • 4x4  <b>1988-99</b> D • 4x4 L • 4x2  <b>Durango</b> R • 4x2 S • 4x4  <b>Pickup, Ramcharger, Van</b> <b>1983-87</b> B • Wagon, Van D • 4x2 W • 4x4  <b>1988-93</b> B • Wagon, Van E • 4x2 M • 4x4  <b>1994-99</b> B • Wagon, Van C • 4x2 F • 4x4  <b>Raider</b> J • Raider  <b>Ram-50</b> <b>1983-88</b> K • Power Ram-50 (4x4) P • Ram-50  <b>1987-93</b> L • Ram-50 M • Power Ram-50 (4x4)	<b>6 Series (Cont.)</b> Caravan, Voyager, Town & Country <b>1984-88</b> 0 • Extended Wagon 1 • Wagon 3 • Van <b>1989-95</b> 1 • Van 4 • Extended Wagon 5 • Wagon <b>1997-99</b> 6 • PWD S • AWD  <b>Dakota</b> <b>1987-88</b> 4 • Conventional Cab 5 • Club Cab <b>1989-99</b> 3 • Club Cab 6 • Conventional Cab 8 • Open Body/Convertible  <b>Durango</b> 7 • Sport Utility 2-Door 8 • Sport Utility 4-Door  <b>Pickup, Ramcharger, Van</b> <b>1983-88</b> 0 • Extended Wagon 1 • Wagon 2 • Sport Utility 3 • Van 4 • Conventional Cab 5 • Club Cab  <b>1989-99</b> 1 • Wagon 2 • Sport Utility 3 • Van 4 • Conventional Cab 5 • Club Cab	<b>7 Body Style (Cont.)</b> Pickup, Ramcharger, Van (Cont.) <b>1989-99</b> 1 • Van 2 • Club Cab 2-Door (1996-99) 3 • Wagon (1997-98) 3 • Club Cab (1989-97) 3 • Club Cab 4-Door (1998-99) 4 • Extended Van/Wagon 5 • Wagon 6 • Conventional Cab 7 • Sport Utility 3-Door 8 • Sport Utility 4-Door  <b>Raider</b> 3 • 3-Dr Metal Top or Van  <b>Ram-50</b> 4 • Conventional cab-short bed 5 • Extended cab 9 • Conventional cab-long bed  <b>8 Engine Type</b> B • 2.4L 16V MPI (1996-99) C • 3.0L Turbo Diesel (1990-96) C • 2.5L 200C (1984-88) D • 3.0L (Ram-50) (1981-89) D • 3.0L Turbo Diesel (1997-99) E • 2.6L (Ram-50) (1981-89) G • 2.4L (Ram-50) (1993) G • 2.5L TBI (1989-94) G • 3.0L 200C (1989-99) H • 3.7L (1983-88) J • 2.5L (Ram-50) (1981-88) J • 2.5L Turbo (1989-93) J • 3.0L V6 CHA (1996-97) K • 5.2L TBI (1989-96) L • 3.0L V6 MPI (1991-98) M • 3.7L 200C (1993) M • 3.9L 200C (1996-99) N • 3.7L (1984-85) P • 2.5L EFI R • 3.0L MPI (1989-98) S • 3.0L (Ram-50) (1990-93) T • 5.2L 40C (1988-89) T • 5.2L 200C (1990-98) T • 5.2L V6 CHA (1996-99) U • 5.2L 40C (1989-85) V • 5.9L 200C (1984-88) W • 2.4L (Ram-50) (1990-93) W • 5.9L 40C (Fleetside) (1983-88) W • 5.0L V10 MPI X • 2.4L 16V (1996) X • 3.0L MPI (1992-99) X • 3.9L TBI (1988-91) Y • 5.2L MPI (1992-99) Y • 5.2L TBI (1989-91) Z • 5.0L MPI (1993-99) Z • 5.9L TBI (1999-02) Z • 5.9L 40C (California) (1983-88) Z • 5.2L 200C (1988-99) Z • 3.0L EFI (1988-87)

5. VIN information part 2.

# TNL Subscriptions



This is THE source for automotive technology, safe opening techniques, electronic security and much, much more.

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#SUB - 1,2,3,4,5,6



VIN INTERPRETATION		
CHRYSLER MOTORS		
Chrysler Motors Trucks (Cont.)		
<b># Engine Type (Cont.)</b> 3 = 3.0L MPI (1989-99) 5 = 2.0L (Ram-50) (1981-85) 6 = 5.9L EFI (HDC) (1990-99) 7 = 2.5L Turbo Diesel (1997-99) 7 = 2.5L (Ram-50) (1981-85) 8 = 5.9L Turbo Diesel (1990-91) 9 = 2.5L (Ram-50) (1981-85)	<b>11 Assembly Plant</b>  <b>12 Transmission Code</b> Ram-50 (1983-85) 1 = 4-Speed (Federal) 2 = 4-Speed (California) 3 = 4-Speed (Canada) 4 = 5-Speed (Federal) 5 = 5-Speed (California) 6 = 5-Speed (Canada) 7 = A/T (Federal) 8 = A/T (California) 9 = A/T (Canada)	<b>13-17 Serial Number</b> Ram-50 (1983-85) • Sequential Production Number
<b># Check Digit</b> • 9, 0, or X	<b>13-17 Serial Number</b> • Sequential Production Number	
<b>10 Model Year</b> D = 1983 K = 1989 S = 1995 E = 1984 L = 1990 T = 1996 F = 1985 M = 1991 V = 1997 G = 1986 N = 1992 W = 1998 H = 1987 P = 1993 X = 1999 J = 1988 R = 1994		

6. VIN information part 3.

Acura-Volvo		Application Tables	
FORD MOTOR CO. (1989-99)			
Model	Air Bag Application Location	Seatbelt Pretensioners Yes/No	System Disabling Wait Time
Aerostar	1992-97 DS	No	1 Min
Aspire	1994-97 DS	No	1 Min
Bronco	1995-96 DS	No	1 Min
Capti	1991-94 1991-93 DS 1994 DS	No	5 Secs 1 Min
Compass	1989-99 1990-91 DS 1992-93 DS 1994-96 DS	No	1989-91 15 Mins 1992-99 1 Min
Contour	1995-99 DS	No	1 Min
Cougar	1994-97 DS	Yes	1 Min
Cruiser	1995 DS	No	1 Min
Crown Victoria	1990-99 1990-91 DS 1992-93 DS 1994-99 DS	No	1990-91 15 Mins 1992-99 1 Min
Econoline	1992-99 1992-96 DS 1997-99 DS	Yes 1998-99 No 1990-92	1 Min
Escort	1994-99 1994-99 DS	No	1 Min
Escort Coupe 2.5i	1997-99 DS	No	1 Min
Explorer	1997-99 DS	No	1 Min
Explorer	1995-96 DS	No	1 Min
F 150/250 Series	1995-99 1995-96 DS 1997-99 DS	No	1 Min
Grand Marquis	1990-99 1990-91 DS 1992-93 DS 1994-99 DS	No	1990-91 15 Mins 1992-99 1 Min
Mark VII	1990-92 DS	No	1990-91 15 Mins 1992 1 Min
Mark VIII	1993-98 1993 DS 1994-98 DS	No	1 Min
Mustang	1997-99 DS	No	1 Min
Mustang	1990-99 1990-91 DS	No	1990-91 15 Mins 1992-99 1 Min
Mystique	1995-99 DS	No	1 Min
Navigator	1995-99 DS	No	1 Min
Probe	1993-97 1994-96 DS	No	1 Min
Ranger	1995-99 DS	No	1 Min
Sable	1990-99 1990-91 DS 1992-93 DS 1994-99 DS	No	1990-91 15 Mins 1992-99 1 Min
Taurus	1990-99 1990-91 DS 1992-93 DS 1994-99 DS	No	1990-91 15 Mins 1992-99 1 Min
Tempo	1989-94 DS	No	1989-91 15 Mins 1992-94 1 Min

7. Air bag information table part 1.

up into two sections. The first section explains what a VIN number is and where it can be found. It also tells you how to interpret what you find. There are two exercises to practice on, just to make sure you have it down.

The second section has all of the VIN tables. Included in the tables are all U.S. made vehicles, 15 Asian manufacturers and 13 European manufacturers. Did you know there were that many manufacturers? I didn't.

All VIN numbers are 17 characters long. The specification sticker including the VIN number for a Dodge truck can be seen in *photograph 3*. The VIN is

1B7KF26C3RS100009. The last six digits are the actual serial number of the truck.

*Photographs 4, 5 & 6* show all the information that is used to create the VIN for a Chrysler truck. As an interpretation example I will use the VIN of 1B7KF26C3RS100009 from the Dodge sticker shown.

1. The first position is a "1". This represents a U.S. made vehicle.
2. Next we have a "B". The "B" represents Chrysler.
3. The "7" means truck.
4. The "K" represents the GVWR of

Application Tables		Acura-Volvo	
FORD MOTOR CO. (1989-99 - Cont.)			
Model	Air Bag Application Location	Seatbelt Pretensioners Yes/No	System Disabling Wait Time
Thunderbird	1994-97 DS	No	1 Min
Topaz	1989-94 DS	No	1989-91 15 Mins 1992-94 1 Min
Towncar	1990-99 1990-91 DS 1992-93 DS 1994-99 DS	No	1990-91 15 Mins 1992-99 1 Min
Tracer	1994-99 1994 DS	No	1 Min
Villager	1994-99 1994-95 DS 1996-99 DS	No	1994-95 15 Mins 1996-99 1 Min
Windstar	1995-99 1995-96 DS 1997-99 DS	No	1 Min

8. Air bag information table part 2.

## 1995 FORD MOTOR CO.

### SYSTEM OPERATION CHECK

Aerostar, Aspire, Bronco, Continental, Contour, Cougar, Crown Victoria, Econoline, Escort, Explorer, F-Series, Grand Marquis, Mystique, Mark VIII, Mustang, Probe, Ranger, Sable, Taurus, Thunderbird, Towncar, Tracer & Windstar – Turn ignition switch to ON position. AIR BAG warning light should come on for 4 to 8 seconds and then go off. If air bag warning light does not respond as specified, system must be inspected and repaired.

Villager – Turn ignition switch to ON position. AIR BAG warning light should come on for 7 seconds and then go off. If air bag warning light does not respond as specified, system must be inspected and repaired.

### DISABLING & ACTIVATING AIR BAG SYSTEM

#### DISABLING SYSTEM

Aerostar, Aspire, Bronco, Continental, Contour, Cougar, Crown Victoria, Econoline, Escort, Explorer, F-Series, Grand Marquis, Mystique, Mark VIII, Mustang, Probe, Ranger, Sable, Taurus, Thunderbird, Towncar, Tracer & Windstar – Turn ignition switch to LOCK position and remove key. Disconnect negative battery cable and then positive battery cable. Wait 1 minute before servicing air bag system.

Villager – Turn ignition switch to LOCK position and remove key. Disconnect negative battery cable and then positive battery cable. Wait 10 minutes before servicing air bag system.

9. Air bag system check and disabling procedure.

the vehicle. In this case it is 8000 to 9000 pounds.

5. The "F" means this is a four wheel drive vehicle.
6. The "2" is for 2500 or 3/4 ton.
7. The "6" is for conventional cab.
8. The "C" is for the 5.9L Cummins Turbo Diesel.
9. The "3" in the 9th position is a check digit. Chrysler uses this position internally.
10. The "R" is the year of the vehicle. "R" means 1994.
11. The "S" represents the plant of assembly for the vehicle.



12. The 100009 remaining numbers is the actual serial number of the vehicle.

Like I said before, there is a lot of information in a VIN number. Probably the most important part of this number is the 10th position, which is the year of manufacture. This position also has a rule to follow. They call it the 10th digit rule. Because

some numbers and letters look alike, they never use the following, "I, O, Q, U or Z" in the 10th position.

I am sure you can see the advantages that interpreting a VIN number can give you.

Now let me tell you about the Mitchell Air Bag Quick Reference Guide.

The Mitchell Air Bag Quick

Reference Guide also has a lot of valuable information. There are four sections in this book, and I do mean book. It is close to 400 pages long, and this is the quick reference guide.

The first section is the application table. This is where you find out how many air bags the vehicle has (*see photographs 7 & 8*). An example is the 1999 Ford Cougar. This car has four air bags. This table also tells you how long to wait before you can work on the vehicle after disabling the air bag. In the case of my 1995 Ford Econoline, I would have to wait 1 minute.

**B**efore doing any actual work, the table says to go to page 2-21 for 1995 vehicles. The book tells how to test the air bag system using the flashing dash light and what position the key should be in when testing (*see photographs 9 & 10*). You might ask, "How can you test the air bag to see if things are working properly if you don't have the key"? Well, if you don't have a key you can't. But if you are replacing a troublesome lock, you can perform the test. I like this because I can show a customer that the air bag system has a malfunction before I start work on the vehicle.

In section three there is a listing of all the component locations associated with the air bag. Things like the control module, impact sensors, etc (*see photograph 11*). This part probably is not extremely important to us, but it could come in handy sometime.

Section four is titled, "Air Bag Facts To Remember." This section describes how an air bag works, different air bag systems, air bag disposal and much more.

The cost for these books is \$35.00 for the Automotive VIN Interpretation Guide and \$49.95 for the Air Bag Quick Reference Guide. They can be purchased direct from Mitchell. If you do a lot of automotive work, these can really help.

*For more information about these two books or any of the many other Mitchell books that are available, Call them at 1-800-238-9111 or write to them at Mitchell International, P.O. Box 26260, San Diego, California 92196. You can visit their web site at [www.mitchell.com](http://www.mitchell.com). Circle 281 on Rapid Reply.*

**TNL**

September 2000 • 153

## Ford Motor Co.

### ACTIVATING SYSTEM

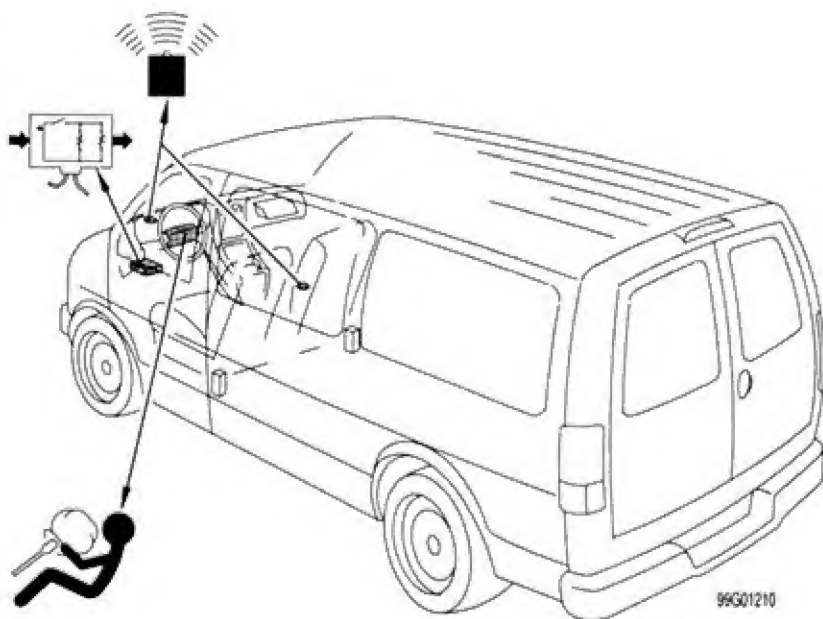
**Aerostar, Aspire, Bronco, Continental, Contour, Cougar, Crown Victoria, Econoline, Escort, Explorer, F-Series, Grand Marquis, Mystique, Mark VIII, Mustang, Probe, Ranger, Sable, Taurus, Thunderbird, Towncar, Tracer, Villager & Windstar** – Turn ignition switch to LOCK position and remove key. Connect positive battery cable and then negative battery cable. Perform SYSTEM OPERATION CHECK.

#### 10. Air bag activation procedure.

### COMPONENT LOCATIONS (ECONOLINE)

Component	<sup>1</sup> Location
Control Module .....	Under Left Dash, Left Of Steering Column
Driver Air Bag Module.....	On Steering Wheel
Impact Sensors.....	Center Front Radiator Support
Safing Sensor .....	Right Frame Rail

<sup>1</sup> Refer to Fig. 59 for component locations.



#### 11. Air bag component locations.



# Protecting Your Assets

by Andy Bollman

**A**merican businesses lose almost 12 billion dollars each year to check fraud. Small businesses are frequent and vulnerable targets. Check counterfeiters, forgers, and thieves love stealing from small businesses as they are often seen as easy prey.

## What Should You Know

Payroll checks are the most common target of check fraud artists. In addition to stealing, forging, and cashing blank payroll checks,

criminals can alter legitimate checks, which have been lost or stolen. The payee's name or the amount of the check for example, can be modified. Because the banking industry processes over 60 billion checks annually these types of fraud are difficult to detect.

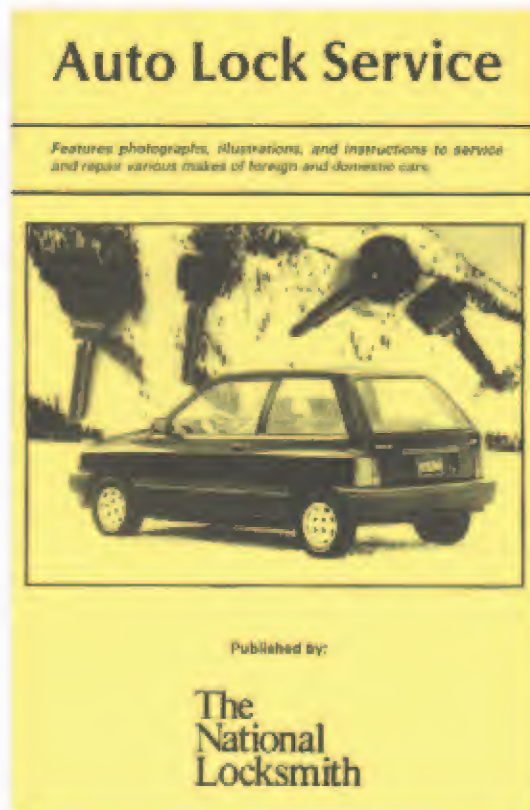
Check alterations can be accomplished in a variety of ways, including erasing information and retyping it, blackening out existing information, and reprinting new information with a laser printer, or chemically washing

the document to change the payee's name and check amount.

Last but certainly not least, the widespread use and availability of high quality desktop publishing technology has created yet another avenue for crime, computer assisted check fraud. According to recent statistics, the rate of this particular crime has been doubling for each of the past three years.

## How does it happen?

One of your employees cashes a payroll check at a local check cashing



#ALS - 1

## Auto Lock Service

Covers opening and service techniques.

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store. The unscrupulous proprietor of the service scans the check into a computer and proceeds to reproduce a nearly perfect copy of your company's payroll check. After a bit more work, additional checks made payable to a number of different people have been fabricated.

#### What Can You Do?

Implement the following check fraud deterrents:

1. Make a concerted effort to protect your checks. Don't allow your employees, or anyone else free access to them. Get in the habit of treating them as if they were cash.

2. Keep accurate records and verify your bank statements in a timely manner. Many banks have a 90-day time limit on making adjustment for mistakes, which can range from simple accounting errors to actual incidents of fraud. Pay special attention to tracking the cashing of all checks issued by your company, particularly payroll checks.

3. Purchase and use checks that have built in security features, which can prevent them from being altered or copied. Look for check products that protect against both alteration and duplication.

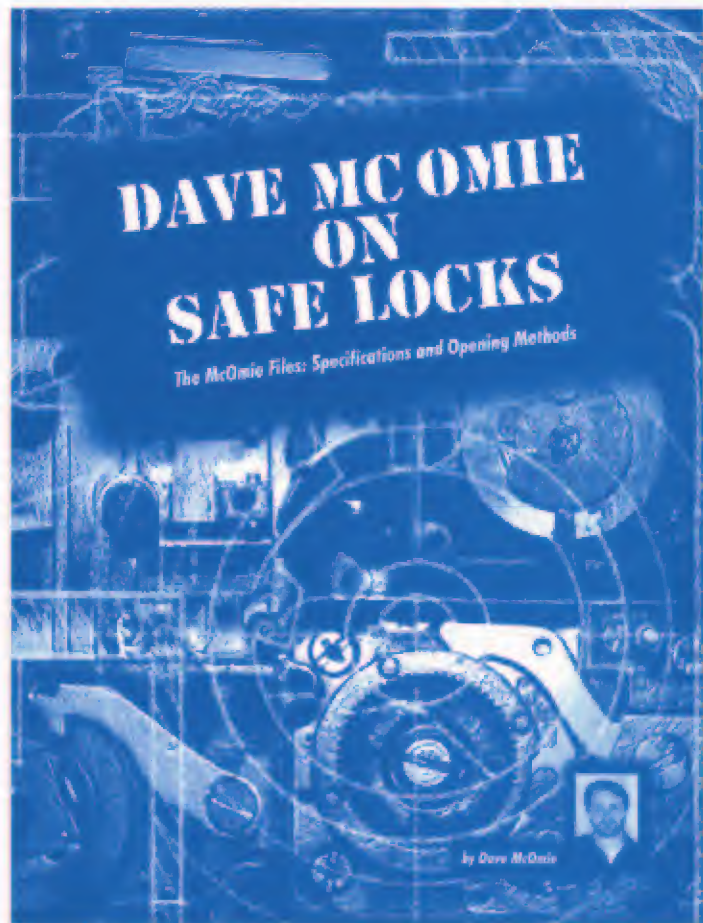
Security features that discourage would-be offenders from altering your checks include the use of colored pantographs, moir  patterns and chemical reactants that produce stains making alteration attempt immediately obvious. In addition, micro printing and watermarking features which are difficult or impossible to reproduce, protect against duplication.

#### The Check Fraud Trend Will Continue

Despite several decades of predictions for a checkless society, check volume has consistently continued to grow. Other payment mechanisms including credit and debit cards as well as direct deposits have complemented rather than replaced checks. As check use continues to rise the incidence of check fraud will inevitable increase too.

Your small business, however, doesn't have to fall prey. Follow the few simple yet effective steps above and take a proactive approach to protecting both your business and yourself. **TNL**

## Dave McOmie on Safe Locks



Almost 300 pages of information, photographs and illustrations give you every scrap of information about a huge variety of safe locks.

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#DMSL - 1



# 2000 TAHOE

by Tony Vigil & Nelson Rivera

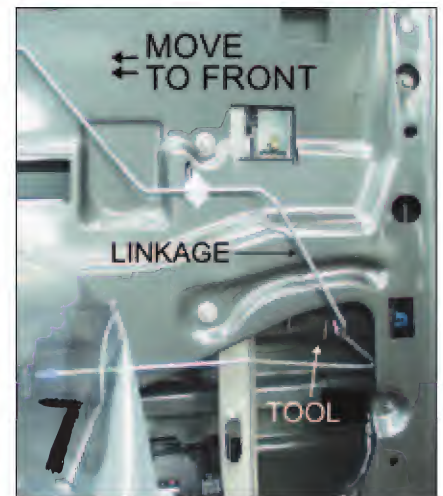
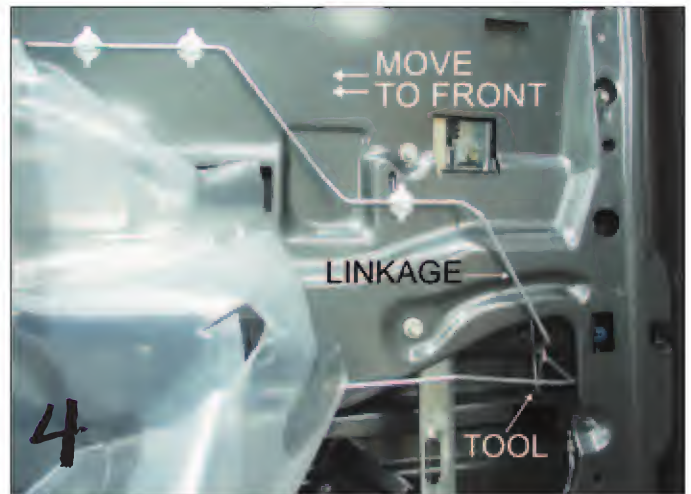
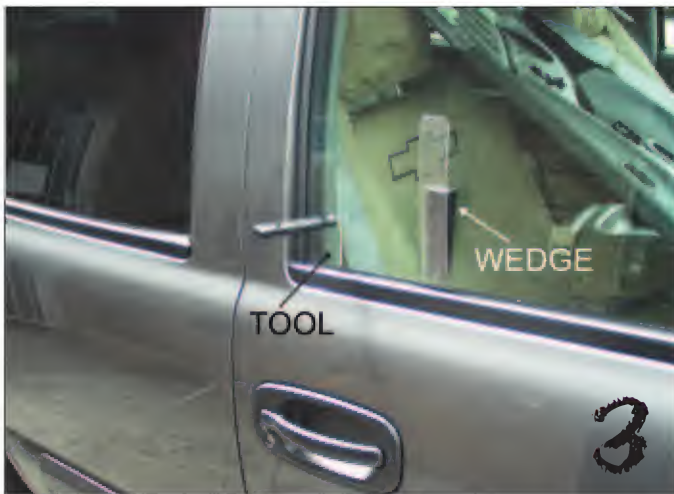


Ok, in some places gas is going for almost \$2.00 a gallon, and sales for the big three US automakers are dropping fast — but not when it comes to the big sports utility vehicles. America's love affair with the automobile is in full swing as it relates to the SUV. Sales are through the roof, and in spite of rising gas prices, domestic and foreign automakers alike are adding gas guzzling SUV's to their line.

With all of the new SUV's, and different versions of trucks built on the same platform, things can get a bit confusing for locksmiths and other professionals who service these vehicles. For example, General Motors released its new version of both the Chevrolet Tahoe and the Suburban as well as releasing the new Yukon and Yukon XL under the GMC label for 2000. All of these babies are selling like hotcakes even with the high gas prices.







Even before we get into the actual openings, let's start by getting these models straight: In years past, Chevrolet and GMC always shared the Suburban model, which means there was a Chevy Suburban and a GMC Suburban and they were both the exact same vehicle. For 2000, things got a little bit weird. The all new Chevy Suburban rolled out for 2000, however the GMC version was re-christened as the Yukon XLT. So the Chevy Suburban is the same as the GMC Yukon XLT, neither of which are the same as the GMC Yukon.

Next, we get to the 2000 Chevy Tahoe. The Chevy Tahoe is the sister vehicle for the GMC Yukon (not the Yukon XLT). This would be bad enough, except GMC also makes the Yukon Denali. The Denali was manufactured on the same platform as the Yukon, up until 1999. But in 2000, while the Yukon was released as all new, the Denali was not. The Denali is, however, all new for 2001 and is now made on the same platform as the luxurious Cadillac Escalade.

Confused? Good. Now for the simple part... all of the previously mentioned models open the same way for 2000.

This is another reason why security professionals must remain up to date with their equipment and materials. Of course, in the manuals which accompany your High Tech Tools set of car opening tools, each vehicle is listed separately, so finding the correct opening is quick, simple and easy.

In this article we will open these vehicles using the Chevy Tahoe as the model, and is the new GM body style for 2000. (See photograph 1.)

These vehicles employ a horizontal style linkage similar to many GM vehicles. However, the difference is that these linkages run at an angle down the door and are, therefore, a bit more difficult to move forward and unlock. These slight variations in placement and movement may be unnoticeable to the layperson, but understanding the differences can save the professional locksmith

precious time and frustration- not to mention greatly reduce the likelihood of damaging an expensive vehicle.

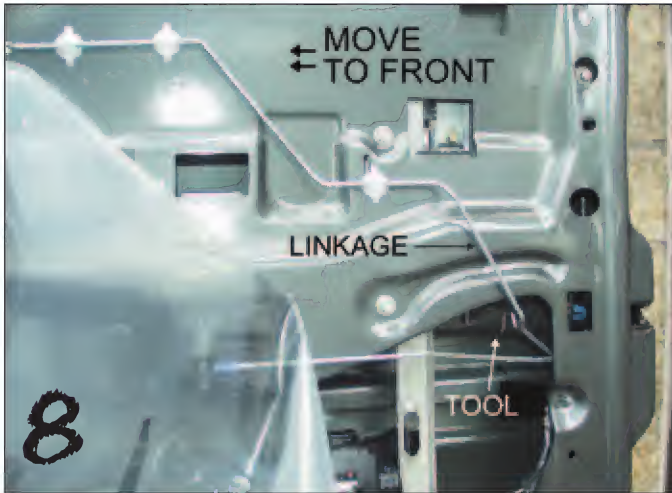
The basic idea behind this opening, however, is the same: simply move the lock rod forward.

To demonstrate this opening we will be using the High Tech Tools tool number 23, also known as the Horizontal Linkage Tool, which is method one in the manual.

Start by creating an opening in the front passenger door with a strip saver and wedge. Then insert the number 23 tool into the door with the working end of the tool facing the front of the vehicle (See photograph 2.) Note the tool is lower directly above the door handle. Next, lower the tool deep into the door, until only the tool handle is sticking out, then turn the handle away from the vehicle in order to access the lock linkage inside of the door. (See photograph 3.)

By viewing the linkage system from inside of the door, we can see how low and to the right the opening in the door frame resides this is why





you must lower the tool above the door handle- not in the middle of the door- and lower the tool deep into the door cavity. (See *photograph 4.*) Here is a close up view of where and how the tool hooks the linkage in order to make a successful opening. Because of the angle of the linkage, you will have to push a little harder to move this linkage. Move the tool handle towards the rear of the vehicle in order to move the linkage and unlock the door. (See *photograph 5.*)

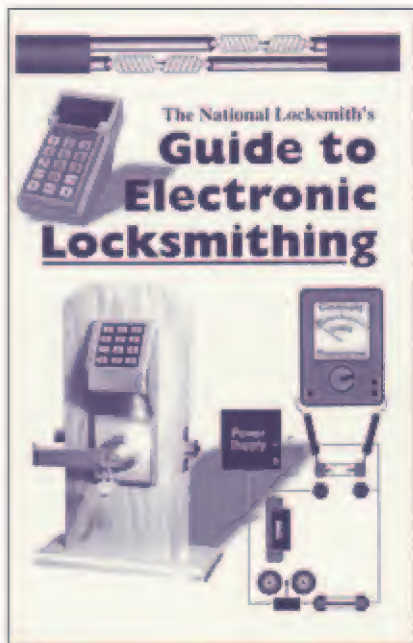
With most openings, High Tech

provides alternate opening methods, and this is no exception. The second method is very similar to the first, but uses the number 64 tool, which hooks the lock linkage with an upward motion rather than downward.

After inserting the strip saver and the wedge, lower the 64 tool into the front passenger door directly above the door handle. (See *photograph 6.*) Like with the 23 tool, lower the 66 tool deep into the door before turning the tool handle away from the vehicle in order to access the lock linkage. (See

*photograph 7.*) The close-up allows us to see that with this tool, the working end hooks the linkage with an upward motion instead of the usual downward motion. (See *photograph 8.*) This hooking technique may be easier for some locksmiths than the traditional one employed by the 23 tool, and so you may consider using it.

Move the tool handle towards the rear of the truck to move the linkage and unlock the door. (See *photograph 9.*) **TNL**



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#EL - 1



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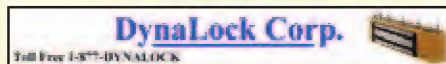
<http://www.adesco.com>

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## McDonald DASH Locksmith Supply



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## WEB REVIEW

### SecuraKey

<http://www.securakey.com/>



Secura Key has been in the business of manufacturing access control equipment for over 20 years. They offer a complete line of access control products ranging from single door, highly intelligent stand alone systems, to complete multi-door, online PC based systems. Reader technologies include slotless TOUCH CARD®, PROXIMITY, and other leading technologies.

The web site offers a good overview of products and software used in their systems. You can even download a variety of the software programs used in conjunction with the company's hardware. Also very convenient is the list of distributors which makes it easy to find a supplier near you.

Particularly valuable is the listing of Product Training dates and locations which are listed in the Events section. The company has many training opportunities available to help locksmiths move deeper into this profitable field.

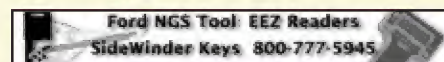


## Major Manufacturing



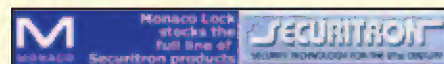
<http://www.majormfg.com>

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## Monaco Lock



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## National Auto Lock Service, Inc.



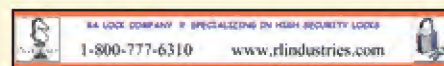
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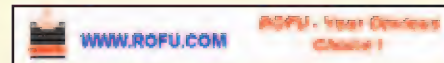
<http://www.omahawh.com>

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<http://www.rlindustries.com>

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<http://www.rofu.com>

## Security Resources, Inc.



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September 2000 • 167



Taking  
Industry Products  
for a

## TEST DRIVE!

In 1996 the Ford motor company introduced a new 8-cut double-sided key locking system. Prior to this, most Ford products used a clip to remove the door lock that was easily accessed on the side of the door. Ford changed this service friendly arrangement and the retaining clip and lock is now hidden deep inside the door cavity, requiring door panel removal to access. Then Ford decided that a glove box lock was a thing of the past, so it too is now gone. Ford then decided that with the advent of remote locking/unlocking ability, a passenger door lock was no longer necessary, so it was discontinued. Now the only mechanical locks left on many Ford vehicles is the drivers door lock and the ignition lock.

The new *Ford 8-cut Decoding Key Set* consists of 1 Magic Key, 64 lettered keys and 78 numbered keys plus a supplied chart. 143 keys may seem ominous, but once you learn the system, that number is quickly reduced to a handful and in the end an exact bitting is achieved.

### USING THIS 8-CUT KEY SYSTEM:

Insert the Magic Key into the door lock. This key identifies the first wafer as being something other than a number one wafer. It will then direct you to which set of decoding keys to start with. If the Magic Key goes into the lock past the mark on the key with the #1 on the left side of the key bow, go to Set A.

### USING SET A:

Start with the AO letter designation stamped on the left side of the key bow and insert it into door lock and rotate. You're looking for a key that will turn the lock enough to break the shear line. If the lock does not turn

enough to break the shear line, flip the key and insert it with the AR letter designation on the left side of the key bow. If that key does not turn, repeat these steps, moving clockwise around the key ring.

### USING SET B:

If the Magic Key does NOT go into the door lock past the mark with the #1 on the left side of the key, go to set B.

Use the same process using set B as with set A. For set B start with the DL letter designation stamped on the left side of the key bow.

Once you identify the key on set A or B which turns the door lock enough to break the shear line, note the letter(s) of that key. Next look for that letter or letter combination on the supplied chart. The six numbers before the \*\* are the cuts for the door. Immediately after the \*\* you will see a number. That is the number of the key from either Set 1 or Set 2 needed to obtain the ignition key.

Try the keys until one turns enough to break the shear line. Once one does, look in the parenthesis where you will see one or more two-

digit  
num-  
bers.

One is  
the miss-  
ing cuts to  
complete the  
ignition key.

Cut a key with the cuts to the door in the first six positions. Then cut the last two positions with the cuts in the parenthesis. There will not be more than five bittings that will need to be cut to obtain the ignition key and often only one biting option is given. The maximum number of blanks you should have to use in a worst case scenario is three.

Maximum number of keys you would have to try is 36. Average time on the job is only three minutes!

### PRICE:

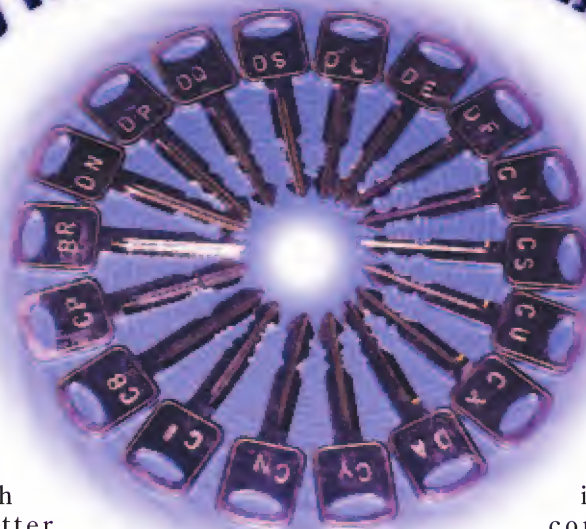
The price of the Ford 8-Cut Decoding Key Set is \$595.00. All cut keys and instructions are included.

### CONCLUSION:

This is an ingenious system that really works. This is not a try-out key set method. This system ultimately produces an exact bitting key that will operate both the door and ignition.

For more information contact The National Locksmith, Phone: (630) 837-2044; Fax: (630) 837-1210; Web: [www.thenationallocksmith.com](http://www.thenationallocksmith.com), circle 285 on Rapid Reply. **TNL**

## Ford 8-Cut Decoding Key Set by The National Locksmith®



### IN SUMMARY:

**DESCRIPTION:** The new Ford 8-cut Decoding Key Set offers a new method of generating a key.

**PRICE:** \$595.00

**COMMENTS:** This is not a try-out key set method.

**TEST DRIVE RESULTS:** This is an ingenious system that really works.